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James Avery

OLD JIM AVERY'S
OWN
FARRIER AND RECIPE BOOK,

BEING

A CHEAPER, SAFER, AND SURER METHOD OF FARRIERY THAN
ANY EVER BEFORE OFFERED TO THE WORLD:

ALSO

DISCLOSING THE WHOLE SECRET AND GREAT MYSTERY,
BOTH ANCIENT AND MODERN,

OF

TRAINING AND EDUCATING THE HORSE,

TOGETHER WITH

HINTS ON BREEDING AND SURGERY,

CONTAINING OVER ONE HUNDRED CHOICE RECIPES, FOR THE
PREVENTION AND CURE OF DISEASES IN HORSES,
ILLUSTRATED WITH ENGRAVINGS, Etc., Etc.

TO WHICH IS PREFIXED

A BIOGRAPHY OF THE AUTHOR, BY A FRIEND,

WITH A

Life-Like Portrait of Old Jim himself.



ALBANY:
PRINTED BY MUNSELL & ROWLAND,
No. 78 STATE STREET.
1859.

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Entered according to Act of Congress, in the year 1859, by

JAMES AVERY,

In the Clerk's Office of the District Court of the United States for
the Northern District of New York,

PREFACE.

Good news for the horse; joy and long life to him. Time at length has produced the discovery of an infallible remedy for the cure of Farcy and Glanders.

The anatomy of the horse is so little understood by a majority of those who have to care for and do with him, that the phrases used by most writers to designate the different parts thereof, or even a gland or muscle,* are as foreign to their purpose as it would be to call them *Anno Domini*; for they scarcely know whether they are reading about the horse or an Egyptian mummy. And in fact nothing short of a collegiate education, or a full course of lectures on the subject, will enable a person to comprehend the use of medicines by their names, any more than they can see the muscles by looking on a portrait painting of a Raphael, or feel the warm breath of a sculptured marble of a Powers, or of a Michael Angelo.

In this little book I have endeavored to call things by their right names, and carefully avoided the use of all technical terms without giving their meaning. And I have so arranged the work and its index, that one has only to turn to any particular disease he may wish to look at to find the symptoms plainly laid down and the means of cure given, without reading the whole book to find what he wants to know.

* What, for instance, does the farmer understand by *schirrus* (an indurated gland), *metacarpal*, *os suffraginis*, *sessamoid*, *os coranæ*, *os naviculare*, and *os pedis*, with the *metatarsals*, &c. (names of bones), *unguentum hydrargyri fortis* (blue ointment), *semi-membrænosis* (a muscle of the leg), *aorta motica magna* (an artery), *extensor carpi verdealis longior* (a muscle).

What we want is to bring the horse up to his utmost capabilities by the cheapest, most natural and inartificial means that we are capable of arriving at. In time the things of earth fade and decay, and they may as well be worn out as to rust out.

The artificial life that the domesticated horse is compelled to lead, subjects him to various diseases that he would not be liable to in a wild or natural state; and the only remuneration he asks at our hands for his services (and which is our duty to reciprocate), is to make up to him what he lost by his subjugation to man.

“With a very beneficial result, the rod has been banished from our public schools, the cat-o’-nine tails from our army and navy, flagellation and chains from our lunatic asylums.” Hence we see the benefit to be derived from extending the law of kindness to our animals as well as to one another. And I should be right glad to see it tried (as it never has been yet), on a grand scale which must result in universal satisfaction to man as well as the horse.

My friend has written the biography, and I have consented to its publication, further I have not a word to say; it speaks for itself.

The words to be found in the preceding note are all proper and useful terms to the scholar who has been fortunate enough to be able to understand their meaning, but they are a dead language to all others, who, I think, will agree with me in saying that the true philosophy of practice is founded upon the laws of nature, and the theory of disease upon the principles that those laws teach us, and then our materia medica will be the boundless forest.

BIOGRAPHICAL SKETCH OF THE AUTHOR, BY A FRIEND.

In the beginning of the year 1795, Bilious Avery removed from Wallingford, Ct. (being then twenty-two years of age), to the town of Salisbury, in the county of Herkimer, N. Y. After clearing a small piece of ground and building a log house, he returned, in the fall of the same year, to his native state and birth place. In June of the next year (1796) he married Esther Hall Street, and returned to his new home, then almost surrounded by a dense forest for many miles around. But very few had settled in this part of the county before them.* Thus they became early inured to the hardships of settling a new country, and helped change the wilderness into those cultivated and fruitful fields which we now enjoy.

As a natural result, from this union there grew up nine sons and two daughters. Although the advantages

* More than half a century has passed since the town was first settled. It now contains nearly three thousand souls; and still there remain over forty thousand acres of unbroken wilderness within its borders. It has probably furnished as many well-to-do farmers as any other town in the county.

for gaining an education in those days were far from what they now are, yet they succeeded well in mastering the common branches, and fitting themselves for the important stations in life which they afterwards held.

James (who has since been called OLD JIM), the subject of this biography, was born November 18th, 1809, being the sixth son, or eighth one of this family of eleven. The sequel of this man's history discloses several things touching peculiar traits of character and habits of life, that may be read with pleasure and profit by both the youth and parents of our land.

Higher, with him, was ever a word of noble meaning, "the inspiration to all great deeds; the sympathetic chain that leads, link by link, the impassioned soul to its zenith of glory; and which still holds its mysterious object standing and glittering among the stars."

As the impressions made upon the mind in childhood are very lasting, and have considerable influence in forming one's character in after life, perhaps it will not be amiss to state here one that was deeply felt by him in early life. We paint our lives in fresco, and the soft and facile plaster of the moment hardens under every stroke of the brush into eternal rock.

He, as a matter of course in the early part of his life, was brought up under church rule (his parents being Presbyterians, as were a majority of the New England emigrants who came to this state in former days), and, as soon as his infant tongue was able to lisp the Lord's prayer, he was taught to repeat it every night on going to bed, by his Christian mother. This was well, for it had

a lasting and beneficial influence upon his mind. The next thing brought to bear upon his mind was the old fashioned catechism and the lessons taught in the Sunday school, where he learned to read tolerably well for a boy of his age. Being naturally fond of reading, he was at this early age taught to read, as well as to believe, the Bible. He was promised a handsome new book if he would read the Bible through: he did so, and was then told the New Testament was meant to be included in the task. He then went through with that also, using the day time and a good portion of the night to accomplish his purpose. He was finally persuaded, by renewed promises, to read both the Old and New Testaments through, and then the New Testament again, making twice he read the Old Testament, and the New three times, and all this before he was nine years old.

And if you should ask him if he ever got the new book promised him for all this labor, his answer would be, no. This was truly discouraging and detrimental to his education; but which of the two was most injurious to him, the promise not being kept, or over-taxing the mind with this reading, I am not able to say; at any rate neither promises nor books were valued very high by him for some ten years at least, for always after this, while at school, he liked sport better than books, and would have it by exciting his schoolmates to laughter in some way or other, even though it cost him an occasional flogging.

Thus life bore him on like the stream of a mighty river. His little boat* being once launched, it first glides

* See verse at the close of Hints to Purchasers.

along the narrow channel, beside the playful murmurings of the little brook, and the windings of its grassy borders, with nothing to guide its course, except the first lessons taught him by a mother, the trees shedding their blossoms over his young head, and the flowers of the brink seeming to offer themselves to his hands, he was happy with hope, and grasped eagerly at the beauties around him. But the stream hurries him on, and still his hands are found empty. But not so with the mind; it is this which gives beauty to the rose, throws sublimity around the mountain and the comet, envelopes the cascade with beauty, and the heavens with grandeur. And in proportion to the mind's breadth and depth, the store of information it possesses, and the accumulation and scope of ideas, so are the loftiness and intensity of its enjoyments. But his course through youth and manhood has been along a wider and deeper flood, amid objects more striking and magnificent.

He seemed early to realize the circumstances that surrounded him, and was fully impressed with the idea that he must be the artificer of his own fame and fortune, and that success could only be looked for through his own exertions.

While yet a schoolboy, he made himself a book (not the one previously promised him) of clean white paper, in which he daily wrote such words and sentences as he happened to hear fall from the lips of others, which he thought contained any moral or beautiful language, that might be of use to him in after life. This was followed after he had ceased going to school, by keeping a record

of the weather, and, to him, all important events, where he was, what he did each day, and ending, after about thirty years, in keeping an account of the number of horses he had owned, together with the diseases they had been troubled with, and the means of cure employed by him and others. And this was accompanied, the greater part of the time, by the most industrial habits of his hands, working almost incessantly on his farm or elsewhere, being second to none in this respect according to his physical strength. Thus he became a very useful citizen as well as benefactor, and was endeared to his family for producing his full share of the necessaries of life by his own hands.

“ Alike to him is time or tide,
December’s snows or July’s pride;
Alike to him is tide or time,
Moonless midnight or matin prime.”

Being animated by the moving picture of enjoyment and industry, he thus passed along (as in his school-boy days) until he is brought to reflect more seriously upon choosing some occupation for the future that would be congenial to his mind, when one day he chanced to pick up a copy of the first volume of Judge Buel’s *Cultivator*, published at Albany, N. Y., which he became very much interested in, and he soon learned to appreciate its usefulness while reading it very attentively with both pleasure and profit; after which he was not long in making up his mind what course to pursue for a livelihood.

Being intensely fond, from youth, of the horse, therefore the study of it in health and disease would be just the occupation in life to afford ample opportunity to sat-

isfy his growing desires in this respect, as the horse would be brought into requisition in almost all his industrial pursuits, as well as the breeding, raising and training of this useful animal (which is one of the greatest gifts from God to man) could be turned to profitable account, while the whole labor and care would be attended with unbounded pleasure.

Thus he was borne along the stream of life, being sometimes excited by some short-lived disappointment, until he had gained a competency (for the time being), when his past joys and griefs were alike left far behind. But as he gradually arose in the scale of society, he discovered that he was slighted by those who thought themselves his superiors (which might have been true in artificial acquirements, but not in original strength of mind). Feeling deeply chagrined at this unlooked for conduct in those who ought to have been his friends, he resolved to outstrip them in usefulness by applying his mind to reading and study, for the double purpose of acquiring knowledge and avenging himself on those who had thus offended him. This was a noble resolution of a noble mind, and one, too, that was well kept.

His great love for reading and learning was now fairly rekindled anew (as he used to say he might be shipwrecked but could not be delayed, whether the sea was rough or smooth), while a portion of his time at least, was spent in reading the news of the day and other useful matter; and being naturally fond of the horse, he did not fail to read every thing on this subject that he could lay his hands on, as well as to throw on paper every

new idea that occurred to him, which is a commendable habit for all young men to imitate, on this or any other subject of importance. He is one of those men who prefer to acquire by rough experience, what others might choose to be taught. And he generally chooses to be governed by the result of his own experience and reflections rather than hazard a novel experiment, controlled by sudden excitement. Although it requires but a moment's reflection to bring him to a position he deems it his duty as a citizen to occupy, yet he always considers the sober second thought the safest to act upon in all great measures or circumstances in life. He possessed a vitality, a moral vigor, that resisted the enervating influences around him. The early principles of piety (though he did not always follow its impulse), instilled into his heart by his strong minded mother, did help to form a basis of rock to his character in after life, which the winds of temptation in vain assailed and beset on every side, in almost its worst forms, and not the less dangerous because lurking in flowery ambush. His gratitude toward his benefactors was constant, and only equaled by his affection for them.

The reader will readily perceive by this time that his life has been a somewhat chequered one; and he will please have the goodness to remember that a smooth sea never makes a skillful mariner; neither does uninterrupted prosperity and success in life qualify a man for usefulness or happiness. The storms of adversity, like the storms of the ocean, arouse the faculties, excite the invention, prudence, skill and fortitude of the voyager.

“The martyrs of ancient times, in bracing their minds to outward calamities, acquired a loftiness of purpose and heroism, worth a life of ease and security.”

But the river hastens his little boat towards its goal. Thus he sails along through some twenty years of his life, in almost uninterrupted peace and usefulness; and whatever his faults might have been, they were regarded only as the common frailties of mankind. For he always chose to be right rather than be popular; or, in other words, he was unwilling to sacrifice principle for expediency. Those who were acquainted with him through this part of his journey, speak of him as being kind and generous almost to a fault; to whom an appeal for sympathy or relief, was sure to find a ready and cheerful response. And whatever his mind seemed to lack of wit and fancy, was owing to a want of an early polish; but without this and the adventitious aid of fortune (only what was acquired by his industrious pursuits on his farm), he gained a place in society that was worthy of any man. He accomplished this by the force of a strong native intellect, cultivated and improved by application to study in hours of relaxation from work, and which was further strengthened by the closest observation based on a sound judgment. Therefore he may well be styled what is called a “self made man.”

His little boat has brought him now where the roar of the ocean is in his ears. It seems to grow in size as the waters expand. As his wants increase, he has to throw out more sail or be shipwrecked; and when he thinks himself sufficiently rigged for the coasting trade, and

fairly launched on the ocean of life, he engages in speculation, thinking it might be more remunerative than his farmer labors. But he has often strove to accumulate money for the pleasure it gave him in doing so, as from necessity, though he may sometimes have been straightened to obtain a sufficient sum to meet his present demands. He generally, however, contrived some way to take on board enough ballast to counterbalance the sail he gave to the barge.

For a time he was very successful in his new occupation, when he came very near losing all, which was accomplished by a trio of black-coated villains, assisted by one of the legal profession, whose heart was blacker than his coat. This put a damper on his operations for the time being, it is true, but his ever hopeful heart was not to be crushed out in this way. Nor could he be induced to join these scamps for the sake of repairing his fortune (as offers were made him to this effect), but he did not despair. He never hoisted the black flag in his life, but left the work of repentance and punishment to whom it belonged. He only had to fall back to his former pursuits of industry and economy, to soon wipe out his indebtedness brought about by the heartless scoundrels, and preserve his integrity, which was never questioned by those who knew him best.

He was temperate in prosperity, resolute and untiring in adversity, which, to say the least, is a part of a great mind. By thus squaring the yards and bracing the sails (as he soon learned to do) of his little boat, that he first started with down the grassy borders of the little stream, it has at length grown to a middle sized ship, compared

with the surrounding sail on the ocean of life, where the storms and waves are tossing us about. And he has been able to steer his craft thus far through life's meanderings, and to adhere firmly to the first principles of virtue taught him in youth, which ever appear like stars in the firmament, or like a bright ornament among the rubies that make life pleasant and beautiful.

Thus he has occupied a place in the great hive of human industry, content with study, and producing the sweets of peace and innocent pleasure by the sweat of the brow. He possessed a mind that, with the advantages of an early education, and aided by encouragement from family connection or friends, might have raised him still to a higher sphere of usefulness.

“All superiority and pre-eminence that one man can have over another, may be reduced to the notion of quality;” which, considered at large, is either that of fortune, body or mind. The first of these is that which consists in birth, titles, or riches; and it is the most foreign to our natures, and what we can the least call our own of the three qualities named. In relation to the body, quality arises from health, strength or beauty, which is nearer to us, and more a part of ourselves than the former. Quality of mind has for its source, knowledge and virtue. It is more essential to and more intimately united with us, than either of the other two. Every one knows that there are moments, nay, hours of moral weakness, when the soul quails before its inevitable portion—when the gloom of some terrible dread shuts out every ray of hope, and a courage almost superhuman

is needed to endure and brave the trial. He used to say the best way was as good as any. And he never failed to meet bravely the trials, the unavoidable trials of life, after withdrawing from the noise and clamor of a busy world for a time sufficient for repose and reflection, when he always came forth with brightened hope and renewed vigor, which enabled him to confront the dangers of the world and brave the trials of life with fortitude, for, if he ever was ensnared it was while acting under the impulse of the moment. But there are weak souls to whom the hour of triumph never comes. Some of these the grave early claims, and they fade from out the memory that should have cherished them. Others rush to a source of artificial strength, too ignorant or too heedless of consequences to give heed to the voice of kindly remonstrance, which much be followed by a deeper depth of weakness and moral cowardice.

We can give the outlines of one's character and quality of mind as far as we become acquainted with them, and still there is something wanting. Every one, while reading the life and acts of another, has a desire to know how he looks, which can be satisfied better by viewing his portrait than I can do it with the pen. But this much I can say for him: his physical qualities are worthy of the mind and heart that animates them. He stands about five feet eight inches in height; his frame is strong, muscular, but admirably proportioned, while his head is massive, the forehead being high and broad, exhibiting what phrenologists call the organs of ideality, causality, benevolence and veneration in full development. He has a clear, blue and expressive eye, brown hair, the mouth

firm but not compressed, and chin round and finished when shaved so that one can see it. In a word, a union of intellectual, benevolent and fearless expression, with good deportment, and about one hundred and eighty-five pounds as an average weight, make him rather a prepossessing figure to look at.

In youth he was remarkably spry. His frowns and gestures were such, when the lion within was aroused by ill-treatment, that but few men cared to cross his path a second time. But this has been overbalanced since by cultivation of the mind and learning to govern his passions, though he, like most of his race, is unwilling to brook an insult without a proper resentiment. We always find in those possessed of the finer feelings of our nature, the opposite qualities of mind, especially when harrowed up to a pitch that is no longer endurable; for, without this principle we would be but little elevated above the brute creation.

In order to do him justice, as well as the public, touching his knowledge of the horse, and capacity to govern him, it will be necessary to go back some forty years at least, for even in boyhood he is said to have exhibited an intense fondness for horses, and remarkable aptitude for breaking and training them after the old fashioned way; and when but a lad of some dozen years, he would drive or ride horses which had foiled their masters; and I have known him many a time when on the road in company with others whose horses bothered them so they could not make them straighten their traces in some bad place, or up a hill, when, after driving his own safely

over, he would go back and drive theirs over or up, as the case might be, by only taking the reins in his hands and talking to them; for, if the whip had not already been worn up on them, he would lay it aside and be careful not to let them see it. And sometimes, when he found it necessary, he might be seen on the back of one, perhaps whistling while they were drawing the load along.

He was the plow-boy at home, and was allowed to do most of the team work, for he always managed the horses well, and did the work up in a farmer-like manner. He chose to go with the team rather than do anything else, as this afforded him all the sport he needed, aside from the work there was to be done. I well recollect dining at his father's house shortly after he had visited a circus. The family were in waiting for him, when they were startled by seeing the horses he had been plowing with coming at the top of their speed some fifty rods distant, and young Jim (not yet old Jim) standing straight up with a foot on the back of each. As the horses reached the stable, to the joy of his mother and others who witnessed the feat, he leaped from off their backs unhurt, and, what was more astonishing to behold, there was nothing on either horse save the bare halters, the ends of which he held in one hand as they were drawn up between the necks of the horses.

I cannot forbear relating another feat of his to which I was an eye-witness, and which I deem worthy of note for its highly amusing character. It goes to show that he possessed remarkable powers of imitation, combined

with great muscular activity. This occurred in his youthful days, and shortly after he had been to see a wire-dancer and tumbler perform some of his herculean feats on the slack wire, such as going through the sword exercise, snuffing the candle against the wall with the point of his sword, &c. The boys had procured a bed cord and had it strung from beam to girt of the barn and coming down near the floor in the centre. After taking the stretch well out of it, he learned to walk, as well as to lay down and get up again, while swinging as far as the sides of the barn would allow. This brought several of the little neighbors to the barn to see and participate in the play. On one of these occasions, after quite a number of them had congregated, I walked in with several friends to see the sport. Jim, being the champion (as he thought) on the slack rope, without much urging, took his father's swingle knife in his hand for a sword, and mounted cavalry, as he called it. After going through many surprising feats, to the delight and surprise of all present, he next came to the sword exercise, which he performed with great dexterity, mimicking him of the circus in many of his evolutions and drolleries, by balancing it on his chin, twirling it on his thumb, &c. Then came the snuffing of the candle, which was only a wisp of straw one of the boys had tucked up in a crack of the door as a substitute. Jim, after brandishing the swingle knife over his head so as to prepare to cut twice with one motion, as he said, walked towards the candle, making one fell swoop of a blow at it, while at the same time the rope flew out from under his feet, laying Jim,

neck and heels, on the opposite side of the barn floor, and sending the old swingle knife over the big beam on the hay mow. When he picked himself up and got through scratching his head, he said that was nothing but a windfall, but he believed he had cut three times instead of twice. However that may be, I think he has not gone through the sword exercise from that day to this. Thus ended that day's performance in a roar of laughter.

At another time, while calling on him at his farm some years afterwards, I was surprised on viewing his stock of young horses. He showed me eight splendid three year old colts, two two year old, besides the working team and a sucking colt and its dam. These he seemed to almost idolize; and it was pleasing, indeed, to see how fond they appeared to be of him, while they all appeared to know their respective names as well as so many boys would. He had Texas, Sampson, Charley, Petona, Snap, Sidney, Donkey, Minx, Flora, Black Hawk, &c., &c., all of which he raised from colts. They would come to him from as far off as they could hear him whistle, and when approaching at the top of their speed, they put one in mind of a caravan crossing the sandy deserts of Arabia.

He always seemed to be very successful in governing the horse under almost any circumstances; and he has passed through several hair-breadth escapes unhurt, owing to his great presence of mind, and capacity to control the feelings of the horse in moments of danger — once in particular, in attempting to ford the West Canada creek where the bridge had been carried away by a freshet. But after he became acquainted with the more humane

system of treatment, which he discovered in part himself, he practiced with improved success, both in training and charming the horse (as it is called), in learning it to perform tricks, in obtaining perfect control over its passions, intellect, &c. He breaks the horse to suit his own fancy, whatever that may happen to be, whether it is to step or stand at the word, or any other given signal.

He has owned a great many horses, I know not how many, but I should think enough to tow all the boats in the Erie canal through from Troy to Buffalo in one day, if I may so speak, and they have almost invariably improved while in his hands. Though he has dealt largely at times, owning a great number of them, yet whether he always dealt fairly I know not, still he never had any litigation whatever in consequence of said deal, which is more than every one can say.

A person looking at the forest in early fall, after the leaves have been nipped by the frost, might possibly number them; but for me to describe all the good acts of this man, in this little narrative of his life, would be as hard a task as to number those leaves when they are falling like a shower of rain drops. He seemed to delight in doing good, and was content only in doing what to him appeared to be his whole duty, which the following work will plainly show. But we must not look for perfection in any man. His success and ability to administer to the wants of the horse when diseased seems to more than equal that of managing him in health. It always pains him to see one in distress, and his desire to alleviate its suffering seems to have begun almost with his existence, for when quite young, and previous to his acquiring any

professional knowledge, either of disease or its proper remedies, by study, he was among the first to discover the difficulty and prescribe for the same. Hence it became a common saying among those who were immediately acquainted with him (and not unfrequently when the disease had baffled the skill of the experienced) to say, "where is Jim? call him!" And in such cases he seems to have been led by instinct (as it were), and aided by the most scrutinizing observations and good judgment to employ such remedies as were most sure to effect a cure.

Encouraged by the success he met with in this branch of his business, he has been untiring in adding to the knowledge he possessed; for he is one of those men who never thought nor pretended that he knew it all; and his researches after knowledge and association with professional men have enabled him to make many valuable discoveries of his own in this science, besides bringing out before the world many things that others had not the knowledge to accomplish. This he has performed almost regardless of the expense it was to him, although he had not gained a wide-spread notoriety, for the very reason he never made any effort to do so, but generally acted to the reverse of what was necessary to gain what he was justly entitled to. He is a man of few words on this subject; notwithstanding, whenever he saw one of these noble creatures suffering, from whatever cause it might be, he never hesitated to do or tell others what (in his opinion) was necessary to relieve them. Of this there could be found, along the path he had traveled, a goodly

number of willing witnesses that have been profited by his advice.

The work he now offers to the public for their perusal and benefit, is one of the great efforts he has made to do good (after his physical strength had failed him), by giving to the world the result of his experience, for which I hope he will be justly compensated. He has lived to witness the important changes and inventions of about one-half of the nineteenth century, which has been one of the most progressive ages, in many respects, on record. And he has not been an idle looker-on during all this time, but has seemed to profit by the advantages offered him, by cultivation of the mind and endeavoring to keep pace with this age of rail roads, steam and telegraphs.

That man is the impression of a superior power is just as evident to him as the letters used in forming the songs of Zion were made by the types that preceded them. But of his further voyage on earth there is no witness save the Infinite and Eternal. But we may listen to what the poet has to say:

Our author delighted in music and song,
(And the music of nature is surely not wrong,)
From the chaunting of birds and the humming of bees,
To the song of the maid in the shade of the trees.

The clarinet's tone, and the horn and the harp,
(To banish bad spirits and leave a light heart),
Would revive him at once for the task of the day,
In training his chargers for work or for play.

The discov'ries he made remain yet to be told,
And can scarcely be measured by silver or gold,
Yet the fame that is due for such work of the mind,
Is a debt that comes slow from the most of mankind.

And the best of all prophets was once known to say
That no prophet had honor at home, in his day;
And therefore we must wait for time's wheel to come 'round,
And submit to that chance where no better is found.

If 'tis true in all cases that men get their pay
For all trouble, in this life, as some people say;
Then, fate, please be lib'ral and help him to a share
Of the credit that's due for his labor and care.



AVERY'S OWN FARRIER.

INTRODUCTORY REMARKS.

Knowledge.—There have been, heretofore, different definitions given to this word by different persons, viz: wealth, power, &c. But suffice it to say on the present occasion, that knowledge is ignorance met and overcome. Now I do not mean by this that I have overcome all that exists on this important subject, for I do not believe that it is for one man to know all; neither do I think it is right for us to monopolize all that we may learn of wisdom's ways; or, in other words, to keep as a profound secret all we may chance to know, for our own special benefit. But I have often thought that man ought to do as much as the simple worm of the dust that crawls along the earth, leaving his mark in the sand wherever he goes. Thus we should do all the good we can as we pass along through this world, and leave our mark* for the benefit of the race.

I have no claims to scholarship, therefore I make no

* See verse at the close of Hints to Purchasers.

pretensions of the kind. It is my object to be useful rather than to appear learned; and I will offer to the public the information I possess on the subject in question in candor, and I hope in a manner to be understood.

The art of healing, considered as a whole, is of great importance to mankind; and it has long been the custom of many of our professional men to strip it of its simplicity and mystify everything pertaining to it as much as possible.

I have owned, in the course of my life, thus far, over five hundred horses, both young and old, and have never lost but one with any kind of disease whatever; many of which I have raised from colts, and employed in most kinds of business on the road and farm, having consequently often had occasion to exercise my skill (but not to boast) in doctoring them for almost every disease that the horse is liable to. For the last thirty years I have been in the habit of recording the symptoms of disease in the horse as they have transpired before me, together with the remedies employed by me and others in curing the same, which I think will be of use to me (and others hereafter) in the work now before me; and it also furnishes me with a catalogue of recipes that I have often been solicited for; and there is not one of them that I ever knew to fail in effecting a cure when properly administered, for otherwise they would not have found a place in the list. For some years past, I have thought of making them public, but have deferred the matter in order to obtain what further information I needed, and until I was certain that I was right, for fear I might mis-

lead by my ignorance, instead of wisely guiding by my knowledge.

Almost every new discovery meets with opposition from an incredulous people; and the consequence is that many truths, long since discovered, have lain dormant, and but for the notice of some future one perhaps might have been lost to the world forever. I know full well that truth was ever born with many a bitter pang, and most to him who gave it birth; but that it will out-live prejudice, and its claims be acknowledged at last, I could never doubt. It cannot perish, but as far as I am concerned it matters not whether it is universally acknowledged in my day or not. But at this age, and upon this particular subject especially, the claim to entire originality must be relinquished. So far from attempting it, I confess that I shall be obliged to trespass on the language of others in describing many diseases of the horse and the necessary remedies, when I find they contain matter that is useful for my purpose, which acknowledgment I hope will be received in place of marks of quotations, if they should at any time be omitted.

Almost all diseases are brought on by the violation of nature's law in some way or other; and in all cases of disease, such remedies (if any) should be employed as will assist nature in performing her great work, instead of impeding it; for even the old school of medicine has discovered that nature, unassisted by art, is sufficient to cure many diseases even of a violent character. Experiments have been made in several cases to prove this fact, with results satisfactory to all lovers of progress. Sleep and rest are tired nature's sweet restorers.

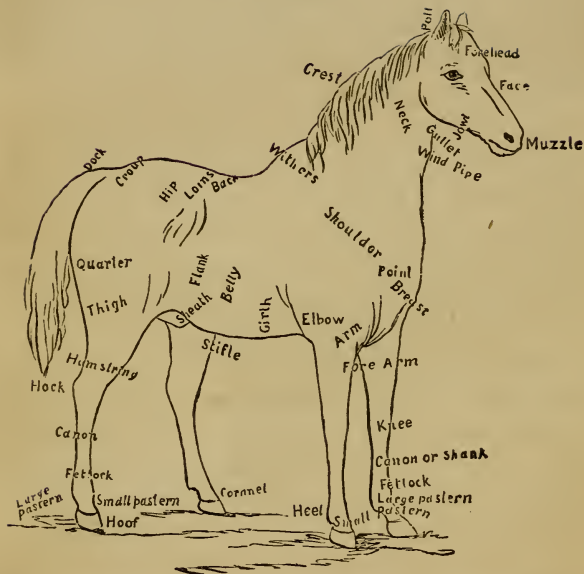
The stomach makes large demands on the circulation of the blood, for the purpose of digestion; and as it and the brain are like two mills on one stream, when one is engaged to the full extent of the motive power the other must suspend its operation. Therefore, the most favorable time to educate the spirited horse or learn him any little trick you might wish to see him perform, is not when his stomach is overloaded with food, for then it is that the brain is most inactive and liable to forget what you wish him to remember, neither would the best time be when he was suffering from hunger, for that alone would occupy too much of his feeling to make a favorable impression in the right direction; but a medium between the two might be chosen to advantage, say half-way between meals, which should be given him at regular intervals.

You have looked at that and probably had your laugh, now look at this and ponder. Like the mind or anything else, low and groveling as well as high, fast or slow, will find its affinity as water finds its level. Well, what is faster or quicker than lightning? Nothing, you say. Well, what contains more electricity in the animal kingdom than some kinds of hair? This accounts, in a certain degree, for the great speed or velocity that some of the canine species are enabled to make, which are known to occupy considerable of their time in licking themselves, and in so doing fill all their food in the stomach with hair. The cause of speed lies not in their muscular power altogether, but for everything there is a time and a purpose.

I do not wish to detract from or claim any credit for

what others have done who have gone before me; I only ask for the merit due, if any, for what I may add to their productions. With these simple remarks, which may serve as a key to the following, I shall proceed to the work before me. And when you have had a chance to see my mark, by a fair, unprejudiced perusal of this work, it will be for you to judge whether or not I have added anything to the stock of knowledge you already possess.

Figure No. 1.



The Name and Situation of the External Parts of the Horse.

CHAPTER I.

BRIEF HISTORY OF THE HORSE.

Reader, it is not my intention to give a history of the horse in this little book, but to inform you how you may cure it when diseased. Although a brief history, together with a few anecdotes and sayings of the men of the old world, may not be deemed out of place, and may be interesting to some, yet we shall have to content ourselves with such accounts as the history of our country affords, and as I possess.

There are only three kinds of these useful creatures, viz: the horse, the ass and the zebra. You may raise a cross breed from the horse and ass (called the mule), but you can go no further.

The native country of the horse remains very obscure, and can not with certainty be traced from history; although he has been found running wild in Asia, Africa, South America, Western Prairies, Rocky Mountains, and doubtless in many other parts of the world.

Notwithstanding, it seems most probable that he was first domesticated in Egypt, but at what period of time it is difficult to tell; 1920 years before the birth of Christ, when Abraham, having left Haran in obedience to the divine command, was driven into Egypt by the famine which raged in Canaan (Gen. xii, 16), Pharaoh offered him sheep, and oxen, and asses, and camels. Horses would doubtless have been added (with the same generous spirit that accompanied this offer) had they then ex-

isted, or had they been subdued in Egypt. When fifty years afterwards, Abraham journeyed to the mount Moriah to offer up his only son, he rode upon an ass, which I think he would surely not have done, with all his wealth and power, had the horse been in use at this time (Gen. xxii, 3).

Thirty years later, when Jacob returned to Isaac with Rachel and Leah, an account is given (Gen. xxxii, 14) of the number of oxen, sheep, camels, goats and asses, which he sent to appease the anger of Esau, but not one horse is mentioned.

It was not until twenty-four years after this, when the famine devastated Canaan, and Jacob sent into Egypt to buy corn, that horses and wagons were first heard of. They were then sent by Joseph into Canaan to bring his father back to Egypt (Gen. xlv, 21, and Gen. xlvii, 17). It would seem, however, that horses had been but lately introduced, or not used as beasts of burden, for the whole of the corn which was to be conveyed some hundreds of miles, and was to afford sustenance for Jacob's large household, was carried on asses (Gen. xlv, 23).

Somewhere about the year 1740 before Christ, is the period when horses appear to have been first used in Egypt. They appear, however, to have rapidly increased and spread abroad; for when the Israelites returned into Canaan, the Canaanites went out to fight against Israel, with chariots and horsemen very many. The sacred volume seems therefore to decide the important point, that the first domestication of the horse was in

Egypt. It also decides another point, that Arabia, by whose breed of horses those of other countries have been so much improved, was not the native place of the horse; for six hundred years after the time just referred to, there were no horses in Arabia.

Solomon imported silver, gold and spices, from Arabia (2 Chron. ix, 14), but all the horses for his own cavalry and chariots, he procured from Egypt (2 Chron. i, 17). In this place it is mentioned that a horse brought from Egypt cost 150 shekels of silver, which amounts to something over seventeen pounds sterling, or a little over eighty-five dollars, American currency; which was considered an enormous sum for those days.

A writer (Goodrich, if I mistake not) thus says, "that horse of Arabia and the southern parts of Europe, are clearly derived from Egypt; but whether they were bred there or imported from the southwestern regions of Asia, or, as is more probably the case, brought from the interior or northern coasts of Africa, can not with certainty be determined."

The first horse-race, of which we have any account, dates back to Greece, eight hundred and eighty-four years before Christ. The first trotting park on record was in Italy, built by Tarquinius Priscus. According to Pliny, it was oblong, three and a half furlongs long, and had rows of seats all around, raised one above the other, sufficient to accommodate 300,000 persons. A race usually consisted of seven rounds, equal to seven or eight miles. Competitors in these games were disciplined for ten months previous. The honor of having gained a

victory then was very great; it extended from the victor to his country, which was proud to own him. So much then for the Olympic games, &c.

For me to undertake to trace the pedigree of any of our valuable horses at this day, back to the original stock of imported horses, viz: the Eclipse, the Barb, the Flying Childers, the Derby or Wellesley Arabian, the Snap, Sampson, the Race horse, the Hunter, &c, with a host of others, is more than useless.

Although we have the Morgans, the Black Hawks, and some fine importations in this country, we may well challenge all other nations of the earth for a good breed of horses. Proper for all uses, we have them from eight to eighteen hands high, and some as heavy as any in the world. Some are calculated for draft, or drudgery, and some for swiftness; we have them suitable for all the various wants we may require of them. We have almost an endless variety of breeds. The earliest history, however, of the horse, gives us an account of but very few; and I am not certain but they were all derived from one—that is, the ass or zebra, for we have their record first. Ancient writers recognize three or four distinct varieties of the ass, viz: Paru, Chamor, Aton and Orud (see Natural History of the Bible, by Thaddeus Mason Harris, by Wells & Lilly, Boston).

We learn also from history that all the different varieties of the apple we have at this day—and which affords one of the greatest luxuries to mankind—were all derived from one parent stock, viz: the little crab apple (as it is called), of which there is very little use made

now.* Then why is it any more improbable that the horse, or the different varieties thereof, were all derived from one parent stock, than to suppose that all the different species of the human race, with all the difference in color, shape and stature, had their origin in Adam and Eve.

The horse has been found running wild in many parts of the world, but always dwarfish in size; and the natives, or red men of the forest, for a great length of time, knew no other use of him than to eat his flesh; but in more civilized countries the horse becomes more tractable, and there and no where else has its real value come to be practically understood.

I might write enough to fill a volume, but as I intended to be brief on this subject, and for fear I might tire the patience of the reader, I will close this part of the history.

The Horse is of Great Utility to Man.

According to his known history he has been the friend and servant of man for nearly four thousand years; all classes of people, from the highest rulers and warriors,

* The transformations wrought by horticulturists and pomologists are all but incredible. Peaches were originally poisonous almonds, and used to impregnate arrows with deadly venom. Cherries are derived from a berry of which a single one only grew on a stem. Nectarines and apricots are hybrids of the plum and peach. The chief esculents, with its relatives, broccoli and cauliflower, come from a marine plant — the common sea-kale, which shoots up on some sandy shores. From wild, sour crabs, scarcely larger than boys' marbles, have proceeded all varieties of apples. The largest and richest of plums are descendants of the black thorn's bitter sloe. Such are mere specimens of vegetable metamorphoses, brought about by transplanting, acclimating, crossing and culture.—*Patent Office Report*, 1849.

down to the lowest peasants on earth, have shared their friendship and utility. The horse has also had its admirers and friends among all classes of men; even the poor Arab treats him as one of his own family, by lodging him in the tent with his wife and children. And yet his education is only in its infancy.

His value has been so estimated from his first subjugation to the present, that a portion at least of all civilized nations, as well as the Indian who catches him wild, have participated in the pleasure and profits of the horse. And his value at the present time depends, to a great extent, on the knowledge and skill we possess in using him; for when we call out the finer feelings of his nature by kind treatment, we are delighted and comforted in the manner and willingness in which he renders his services for our benefit; while to those who know no other way of governing him than by brute force, he often becomes fretful and vicious, and even a dangerous servant; consequently we see that his real value to us rises or falls, according to our ability and manner of governing him.

He has been imported and transported from nation to nation; he is used to do our hardest drudgery, as well as to pride himself in honoring kings; he is used to convey us to places of amusement and worship; in fact there is no avocation in which man is engaged that the horse is not made useful to further his purpose. And in all places, and among all classes, we find his value corresponding with the state of society where he is employed. And here is another idea about the horse which is worth its weight in gold, viz: his cultivation and improvement have a tendency to promote good society. For man,

while cultivating the finer feelings of his nature (as he must, in order to control the horse properly), arrives to that degree of refinement in his mind which is so necessary for a member of good society to possess.

I have known men to buy a pair of horses, paying from three to four hundred dollars for them, which was considered by many an enormous price. The purchaser, after keeping them a few months, would sell them again for double the price he paid, to the astonishment of those who considered the first price extravagant. This may be attributable to the knowledge of the dealer of the market, and his skill in training and improving their condition while they remained in his hands. So we see, too, that the study of the horse is calculated to elevate the mind of man, as well as to replenish his purse.

How often do we see young men whose almost first act in life is to buy a horse, and sometimes before they are able to pay the purchase money; and even part with the last cow and every other valuable before they will part with their horse. This shows the great attachment man has for the horse, which can be traced back through history to the ancient nobleman, as well as the wild Arab. This will be made more apparent hereafter.

"Soon after the time of Alfred the Great, or about A. D. one thousand, it was decreed" (and from this something may be gathered of the relative value of the horse at that time) that if a horse was lost, or negligently destroyed, the compensation should be thirty shillings; a mare or colt, twenty shillings. About this time laws were passed which fixed the price of a foal at fourpence; at one year and a day old, at forty-eight pence;

after which time it was to be broken and trained for the saddle or harness, when it was estimated at one hundred and twenty pence.

In those days the purchaser was allowed time to ascertain whether the horse was free from three diseases, viz: He had three days to prove him for the staggers; three months to prove the soundness of his lungs, and one year to ascertain whether he was infected with the glanders. And for every blemish discovered after the purchase, one-third of the money was to be refunded, unless it proved to be a blemish of the ears or tail.—*Encyclopædia*.

In the time of Henry VIII, an English treatise on the management of the horse was written by Sir A. Fitzherbert, Judge of the Court of Common Pleas, which was the first of the kind ever written. The learned judge wrote thus: "Thou grasyer, thou mayest fortune to be myne opinion or condytion to love horses, and young coltes and foles and go among these; take heed that thou be not beguyled as I have been an hundred tymes or more. And first, thou shalt know that a good horse has 54 properties, viz: 2 of a man, 2 of a badger, 4 of a lion, 9 of an ox, 9 of a hare, 9 of a fox, 9 of an ass, and 10 of a woman."

Later writers, in pirating from Sir A., have given the following description of the horse, which is well known to approximate the truth, viz: "A good horse should have three qualities of a woman; a broad breast, round hips and a long mane—three of a lion; countenance, courage and fire—three of a bullock; the eye, nostrils and joints—three of a sheep; the nose, gentleness and patience—three

of a mule; strength, constancy and foot—three of a deer; head, legs and short hair—three of a wolf; throat, neck and hearing—three of a fox; ear, tail and trot—three of a serpent; memory, sight and turning—and three of a hare or cat; running, walking or suppleness.”

I now give place to the following anecdotes (which are well authenticated), partly to show the love and great attachment of the Arab (as well as others) for the horse, as well as that of the horse for his master.

Among all the studs* kept by the ancient noblemen, you will find that there was scarcely ever one found which was not kind and submissive to his master; the reason of this was because their mode of governing them was invariably that of kind treatment. The passion of love, in all animals, when cultivated and fully developed, is even stronger than that of fear.

When the Arab falls from his mare (observes Smith on breeding), and is unable to rise, she will stop and neigh until assistance arrives; if he lies down to sleep, as fatigue sometimes compels him, in the midst of the desert, she stands watchful over him, and neighs and arouses him if either man or beast approaches.

An old Arab had a valuable mare that had carried him for fifteen years in many a hard fought battle, and in many a rapid, weary march. Although eighty years old, and unable longer to ride her, he gave her and a scimeter that had been his father's, to his eldest son, and told him to appreciate their value, and never lie down to rest until he had rubbed them both as bright as a look-

* A collection of horses.

ing-glass. In the first skirmish that the young man was engaged in, he was killed, and the mare fell into the hands of the enemy. When the news reached the old man, he exclaimed, "Life is no longer worth preserving, for I have lost both my son and mare, and I grieve as much for one as the other;" and he immediately sickened and died.

The following comes home to the bosom of every one possessed of common feeling. The whole stock of an Arab of the desert consisted of a mare. The French consul offered to purchase her in order to send her to his sovereign, Louis XIV. The Arab would have rejected the proposal at once with indignation and scorn, but he was miserably poor. He had no means of supplying his most urgent wants or procuring the barest necessities of life. Still he hesitated; he had scarcely a rag to cover him, and his wife and children were starving; the sum offered was great; it would provide him and his family with food for life. At length, and reluctantly, he consented to the separation. He brought the mare to the dwelling of the consul; he dismounted and stood leaning upon her; he looked now at the gold, and then at his favorite; he sighed, he wept. "To whom is it," said he, "I am going to yield thee up? To Europeans, who will tie thee close — who will beat thee — who will render thee miserable! Return with me my beauty, my jewel; God preserve thee, my beloved; and rejoice the hearts of my children" — and then sprang upon her back, and was out of sight in a moment. Ah, jockey, think of this; did you ever part with a favorite that caused your wife and children to weep?

Sir John Malcom, in his Sketches on Persia, gives several anecdotes, but of a more amusing character, one of which we will notice here. "When the envoy, returning from his former mission, was encamped near Bagdad, an old Arab rode a bright bay mare, of extraordinary shape and beauty, before his tent, until he attracted his attention. On being asked if he would sell her, 'What will you give me?' was the reply; 'That depends upon her age; I suppose she is past five?' 'Guess again,' said he; 'Four?' 'Look at her mouth,' said the Arab with a smile. On examination she was found to be rising three. This, from her size and symmetry, greatly enhanced her value. The envoy said, 'I will give you fifty tomans (a coin nearly equal in value to a pound sterling);' 'A little more if you please,' said the fellow, apparently entertained; 'eighty, a hundred;' he shook his head and smiled. The offer at last came to two hundred tomans. 'Well,' said the Arab, 'you need not tempt me further; it is of no use. You are a rich elçhee; you have fine horses, camels and mules, and I am told you have loads of silver and gold. Now,' added he, 'you want my mare, but you shall not have her for all you have got.'"

CHAPTER II.

It is not absolutely necessary that a man should understand physiology, or even anatomy, to be a pretty good horse doctor; but he should become acquainted with the nature of barks, buds, leaves, gums, and minerals, and understand their medicinal properties, before he pretends to know how to cure disease. It is safest and best to gather your own roots and vegetables for medicinal purposes, when convenient, for which directions will be found hereafter. Apothecaries are not always to be depended on; therefore when you buy medicine it is better to buy it in the natural state and pulverize it yourself, to avoid being imposed upon by adulterated drugs.

How to improve the condition of the Horse.—It may be proper to state here that stables should be comfortably warm; and another thing of some importance is good ventilation. When this is not attended to, the air is impregnated, not only with the emanations from the body, but with the gases that arise from the excrements. Light is also very essential; many a horse has lost his sight from being kept in dark stables. Stables are generally too small; horses are often too much crowded, so much so as to make it extremely uncomfortable for them. It is better to have the stalls five feet wide, than only four, for they are often strained and otherwise injured by trying to get up in too narrow stalls. The horse requires a variety of food, as well as man; of which carrots and other roots afford an essential part, as they are of a very cooling and succulent nature.

When you have a horse diseased in any way, treat him accordingly; but when you have one that is lean in flesh, and looks jaded, and coat stares, without any local disease, only been worked hard, and his fare still harder, and wish to improve his condition (or fat him), if kept up to dry food, give him in his food a spoonful of flour of sulphur three times a week; and if he is a very hearty eater (as they are quite apt to be, in this condition), I should not object to adding to the above as much black antimony as would lay on a ten cent piece, for the purpose of nauseating him a little; after which, twice or three times a week, give a little of the bark of sassafras, well pulverized, and a teaspoonful of ginger. This gives tone and action to the stomach, and is good to purify the blood; if you should think proper to bleed, do it but sparingly; if you feed Indian meal, make it into pudding (by scalding), and add a handful of oil meal. This gives him a very sleek coat. If oats are to be his food, add one-third as much wheat bran; give him plenty of exercise, and let his hay or straw be clean; you should begin with small feeds of grain, and increase by degrees.

As a natural result, from the effects of colds, fevers, and hard fare, the impurities of the blood concentrate in the urine, causing the gelding to become foul in the sheath and yard. It is necessary to clean those parts, which may be done with warm water and hard soap, and followed by a little sweet oil or lard, for the horse cannot thrive well when foul; consequently it becomes one of the first things to be looked after in a horse that you wish to fatten. If his appetite is not good, take a piece of asa-fœtida, the size of a chestnut, and tie it on his bit, or in

the bottom of the box where he eats his grain, with a clean linen rag. A free use of the card and brush, with a good bed, is also indispensable. By following these directions you will be likely to succeed better than you will with turmeric, or colored pea flour, for it is seldom anything more, and is fit only to give that yellow color to medicines that they have long been accustomed to. A few seeds or drops of the oil of annis, to scent medicines, may do no harm. But aside from this, you can dispense with the bayberries, cardamon, coriander, diapente, fennel, fenugreek seeds, grains of paradise, horse-spice, and various others, which only encumber the shelves, and load the drinks of him of the old school, and should be banished from a rational farrier's prescription.*

A horse may be fattened much cheaper when he runs out to grass than when kept upon dry food, for it requires less grain, and he will exercise himself, and needs no medicine, allowing the flies do not annoy him, in which case he will do better to be tied in the stable during the day time, and letting him run out nights. When kept up, green clover and green carrot tops are very beneficial, being a good substitute for the pasture. He should always have clay and salt within his reach, and be allowed to lick what he pleases of it; and it is not unfrequently that this is the only alterative course needed.

* For further particulars, see Condition Powders, how made, in No. 1, Recipes, &c., &c.

CHAPTER III.

A COLD.

“It is not what people read that makes them learned, but what they remember.”

Young horses are most liable to take cold, although old ones are not exempt, and people are apt to look upon it with indifference; but there are few diseases incident to the horse, which do not more or less derive their origin from a cold. The causes are various, but the most common ones are that of driving them until they are warm and sweaty, and then allowing them to stand still where they are exposed to the cold air and wind. If they do not take a severe cold which settles on the lungs, it not unfrequently produces what is worse (in the hands of some), viz: founder. Removing them from hot stables to cold ones, often causes them to take cold, and if they have been high fed and clothed warm, the cold contracted in this way often proves very violent. This is the reason why horses so often catch a severe cold on their first coming out of the dealer's hands, or changing masters; they neglect to rub him until he is dry, or nearly so, before putting on his blanket, as they should, after driving him until he is warm and sweaty.

Symptoms.—When a horse has taken cold, he will be heavy and dull in proportion to the severity of the disease; his eyes will be watery, and after a day or two he will run at the nose (a thin mucous gleet) if the cold be

violent; he will refuse his food and be troubled with difficult breathing, and a cough will ensue. When a horse has a cold like this, his stomach becomes inactive, cold, and is filled, as well as the intestines, with canker, whereby the digestive powers are impaired, and he becomes languid and dull, in proportion to the severity of the cold. Now the internal or vital heat is diminished, the skin becomes dry and husky, and fever begins by reason of the cold, for heat promotes life, and cold, death. Remove the cause by increasing the internal heat, until the stomach is clear of this canker, and you cause a free perspiration. Then the natural heat of the body is sufficient to do the rest, and nature will jog on as before anything happened to your horse. The most common practice in the case of colds, with a majority of farriers, has been to bleed. Now this, in my opinion, is very wrong.

When farmers first turn out to pasture, as they generally do in the morning, their horses sometimes contract colds by feeding through the day and lying down at night, that bring on other diseases, that return with them to the stable after grazing, some months. As a preventive, I would recommend turning them in pasture at evening, then they will feed throughout the night and lie down to rest at day time, and not be so likely to take cold on their first being turned out to pasture.*

* After shedding the coat, or moulting, in the spring of the year, as they do, and especially if they are poorly clothed with flesh, they are but illy protected against the cold storms we often experience in this northern latitude, and had better be sheltered a few nights, or during these storms, than to run the risk of letting them run out.

Cure.—There are many things that are good for a cold, but I shall only mention here those I conceive to be the best. After clothing the horse warmly, take a tea-spoon full of cayenne pepper (for this contains the heat the longest) and put it into a quart of warm water, and give it to him, sweetened if you choose. Repeat once in two hours until it produces the desired effect, not neglecting to rub his limbs and body briskly. Then give him a moderate dose of aloes for physic, this will assist nature in cleansing the stomach and bowels of the canker. After the operation of the physic, it is well to give a spoon full of ginger once or twice a day in his food or drink, for a short time, to assist in keeping up the natural heat. For want of the cayenne, use half a gill of the hot drops, a recipe for which may be found in the list of medicines. A drench of sage or canker tea, will prove beneficial in this, as well as in many diseases of the horse.

CHAPTER IV.

CATARRH, ASTHMA AND COUGH.

Long and bitter are the days that are counted by throbbing pain.

There seems to be no end to the catalogue of diseases of the horse, under their present classification, and perhaps none have given rise to more perplexity among farriers, than the above complaints, which are brought on by a neglected cold, or one of long standing, and are attended with nearly the same symptoms as a cold, as

described in the preceding chapter, Although there is this difference, in cases of catarrh, by holding your ear near the nostrils, and sometimes at a considerable distance, you will hear a rattling or gurgling sound in the head and throat, the flanks work more, while the horse appears to be in great distress at times, and will throw out of the nose and mouth chunks of white, tough phlegm, that frequently appear while he is in the act of drinking, with his head down, which relieves him very much for a time. A settled cough, alone, has given more perplexity than any other one disorder of the horse, and in fact it has often defied all attempts of art, and baffled the skill of the most experienced, and the horse has frequently become asthmatical or broken winded, in spite of all their efforts to the contrary. Sometimes it is owing to pleurisies or malignant fevers, which have left a taint on the lungs or other vessels; sometimes to small eruptions in the glands, which cause the lungs to enlarge, and a quantity of tough phlegm and mucilaginous juices to stuff up the glands and branches of the wind pipe, and sometimes to fleshy substances engendered in the large blood-vessels, for all these things hinder a free respiration and excite a cough.

It is very difficult, sometimes, to determine what kind of a cough you have to contend with, which makes the cure more difficult and uncertain. If the cough be of long standing, attended with loss of appetite and flesh, and a general weakness, it denotes consumption, and that the lungs are full of tubercles. When the cough proceeds from phlegm and mucilaginous matter, stuffing up the vessels of the lungs, the flanks have a sudden, quick

motion, the horse breathes thick, but not with his nostrils distended, like one that is broken-winded. Sometimes the cough will appear to be moist, and at others dry and husky.

In cases where the catarrh appears to predominate, I would recommend for the cure, especially if the cough is dry and husky, to clothe the neck and head well, and give a dose of the cayenne pepper tea, or hot drops, every other morning, and every day between, give a teaspoonfull of the oil of tar (well mixed), with two ounces of brown sugar (this will cut the oil), adding nearly a quart of warm water; stir well, and horn the whole down the horse; and also, every day, steam his head by throwing a blanket over it, and holding his head over a box that contains a hot stone, and pour on to the stone vinegar or pepper sauce; continue this four days. When he has had two doses of each, and has been steamed four times, hold on two or three days. It will be well to give, during the time, a handful of oil meal in his food, if at hand, or a plenty of wheat bran will do, for his food should be light and easy to digest (roots would not be amiss). After this fasting and medicine, repeat the pepper tea as before, and if there is any cough, in lieu of the oil of tar, give him half a pint of onion juice sweetened with loaf sugar, adding a little liquorice, and also grate into this drink a little skunk or wild cabbage root (previously dried, &c). If the cough should be obstinate after the first course of medicine, bleed twice in a week (sparingly), but not otherwise. If he should be any ways costive, his bowels should be kept open by mild physic—flour of sulphur for instance,

in small doses. If the above is persevered in, it is a certain cure. I never knew it to fail to cure the worst of chronic coughs. When the wild cabbage can not be obtained, you may use the lobelia seed, as a substitute, with good success. As a preventive from its running into glanders, use the ointment on the membrane of the nose, given under that head, and it will also aid in curing this.



CHAPTER V.

LUNG FEVER.

“It has been remarked, and, in truth it will apply to all latitudes and meridians, and to all countries, tropical and frigid, savage and civilized, that it is not what men get that makes them rich, but what they save.”

There are a great many horses lost by this disease that might be saved. The lung fever always makes its appearance by a chill; the horse will shake and tremble like a person with the ague. While the chill is on, give him a strong dose of the hot drops, or of the pepper tea; or, if this be not at hand, give him half a pint of fine salt, dissolved in a quart of warm water. This will entirely relieve him of the chill and create a perspiration; but he will appear very sick for a short time, and then revive and be quite well, when it will be well to give him a dose of the peppermint and camphor. But if you should not discover him while the chill is on, and the fever has commenced, it will require different treatment altogether. Then you must bleed copiously; it is the only alternative to save the lungs from becoming tainted,

for which there is no cure. You should take from a gallon to a gallon and a half of blood, according to the severity of the case, from the neck vein, after which, let him inhale the steam from saltpetre dissolved in water, and turned on a hot stone or shovel under his nose. Now see that he is well rubbed and clothed, and then a little ginger and asafoetida in his food will be beneficial. His food should be light for a few days, and he should enjoy rest.

The symptoms in lung fever are different from those of most other diseases. In this disease the horse seldom, if ever, lies down after the fever has commenced until he dies, unless he is relieved. He is stiff and sore all over, and stands with his fore legs as wide apart as possible, so as to give all the room he can to the lungs. Sometimes he will go two or three days after the chill leaves him before he will give out; but he will be weak, his breath will smell bad, the excrement hard and slimy.

CHAPTER VI.

HEAVES.

“Diet cures more than the Doctor.”

The first step towards curing any disease, should be to find out where and what it is, for where there is no enemy there can be no war. There have been a great many recipes given, and medicines compounded, for the cure of this disease; and in connection with other coughs (for they are looked upon by many all alike), it has

baffled the skill of as many farriers as any other one disease of the horse. One reason of this is, because it has been so little understood. Some have contended that it was in the throat, and others that it was on the lungs, &c. I will endeavor to describe it so that you will get my views of it at least.

There are two pipes, one leading to the stomach and the other to the lungs. Where they meet there is a sort of valve, known as the throttle valve. A hearty eater (for they are the most liable to this complaint) in eating coarse and dry food, irritates this place, then by a hard drive, and being exposed to the cold, it becomes swollen, and finally becomes a running sore or canker, for you never saw a horse that was fed on straw or cut feed, that was wet or well moistened, get the heaves. If it was seated on the lungs, the horse would become weak and tire out when put to work, which is not the case; besides it would create inflammation and kill him at once.

Now you turn a horse out to pasture a few days, that has simply got the heaves, and you will see nothing of it. Then you put him up to dry hay one night, and let him drink cold water, and he will heave as bad as ever. Now has the hay or water touched the lungs? No; but it has touched the parts affected. The philosophy of it is simply this: the grass is cooling and healing, and has allayed the inflammation in those parts; the horse breathes free and easy again, and the wound is partially healed under those circumstances. If he should always be allowed this kind of diet, he would not need any medicine to cure this disease, would he? You allow him moistened straw with his meal, plenty of

roots cut fine, wheat bran (or even the flour), and you will not see any heaves,* and he will do as much work as though he were sound, and yet it is very desirable to cure him of this disease if possible, for it is more trouble and costs more to feed him in this way, besides it lessens his value, for he is not a sound horse.

Some people class the heaves with the diseases described in the foregoing chapters, for both excite a cough, but very different in character. The organs affected are quite different. With heaves, the breath is longer, and the flanks are worked with more of a sudden jerk than they are in the former diseases. Now, in order to cure the horse of this disease, let him have food that will favor the object, and, in the first place, feed him one or two quarts of wheat flour every morning, with equal parts, say a teaspoonfull of each, of cream tartar and soda, occasionally omitting the soda, and in lieu thereof, use calcined magnesia. Prepare this in any way that the horse will eat it best. Every other evening give the following: One teaspoonfull of balsam of fir, one tablespoonful of honey, and a half teaspoonfull of pulverized lobelia seed, either in drink or made into a ball with flour. This course will cure most cases of heaves entirely if continued two or three weeks. You should also wet his hay or straw, and add a handful of brown

* If you feed dry hay, do not allow the horse more than eight or ten pounds per day at most, if heavey, for he will eat more than will digest well, and this irritates the stomach, and induces heaves. But what is better, are corn stalks, for he eats those slower, masticates them better, and he does not eat more of them than will digest in the stomach.

sugar to his meal or bran for a short time, and be careful about letting him drink too much cold water at a time, not allowing him to drink what he wants at any time, except evening, after his day's work is done. A roasted onion of convenient size given daily as a ball, will have a very salutary effect on this disease.

CHAPTER VII.

FOUNDER.

Try it and be convinced before you call it a humbug.

Founder is a contraction of the muscles, whereby the coffin muscles suffer most. They lie within and extend to the circle of the hoof (which contracts with the muscle), and if relief is not found immediately, the horse is rendered unfit for a roadster. And any one being so unfortunate as to founder his horse, even on a journey or elsewhere, need never lay by in consequence of the worst founder, more than two or three hours at the most.

I am well aware that there is a disagreement about what causes founder; nevertheless, I have my opinion with the rest. The most common one is drinking cold water, when hot; but a horse that is fatigued, warm, or sweaty, and exposed to the cold air or wind, will often founder because he receives a sudden chill. Grain is stimulating and will not founder a horse of itself; it may create an unusual heat of the body by eating too much at a time, and then, by exposure to the cold air, be more

liable to founder for eating the grain. Heat expands and cold contracts, as every one knows.

Any time within forty-eight hours after a horse is foundered, the Indian Remedy is sure to give relief (and no mistake), for I have had frequent opportunities of seeing it tested, without a single failure. Some may laugh and sneer at this mode of curing a founder, because they can not refute it in any other way. It may seem mysterious to others, and I am not prepared to say what its peculiar properties are, unless it is the electricity it contains; but the more we learn of nature and her laws, the plainer those things appear to us.

Cure.—As soon as you find that your horse is foundered (which you may know by his being stiff and sore, and hardly able to use his fore legs, or keep them under him), take a sharp pointed pen knife and split the wart that is to be found on the back part of the fetlock joint of the fore leg, so as to get a spoonfull, say, of blood from each, by making the incision up and down with the leg. Then lead him to some convenient place for the purpose, and let him stand in brook or pond water, about half way to his knees, two hours. Now lead him back to the stable, and bathe his forward legs in warm water, and rub him well, which will get up a perspiration, and assist in relaxing the muscles. Then give him in food, or ball, or any way you can best, a small handful or lock of hair, taken from the lower part of the abdomen of the human body (of either sex), and your horse will be as well and limber in a short time as though there had nothing happened to him (except the weakness occasioned for the time being), and what is more remarkable,

this remedy will cure him perfectly under all circumstances; and the horse cured in this way seldom if ever has been known to be foundered a second time.

Founder in the first place, or what causes it, is a high state of inflammation, which causes contraction afterwards, and in the early stages of the complaint, this remedy relieves them entirely of the inflammation.

CHAPTER VIII.

BOTS AND WORMS.

“May it prove harmless for evil, and powerful for good.”

Much has been said concerning bots and worms, and almost every one has a different remedy from his neighbor, and yet there are a great many horses destroyed by them every year, and many more are kept lean and weak by those vermin, their owners not knowing what the difficulty is. I have opened horses that have died with bots, some of which have had their stomachs eaten entirely through, being perforated like a riddle; others have had the inner coating of the guts eaten nearly off, in places. I know the above to be facts in the case, notwithstanding what others have or may say to the contrary. It is well known that horses, having many worms, can not thrive well or carry much flesh. Now if the breeding of worms and bots were prevented, it would add much to the strength and usefulness of the animal; and when you have read this chapter through you will know how to do it effectually.

Symptoms, indicating worms, are various, as there are different kinds of those vermin, occupying different parts of the body. Sometimes the horse is lean and jaded, his coat rough and staring, and sometimes there is a white fur to be seen on the end of the straight gut, and at other times he froths and drools at the mouth when driven (without any evident cause to many), and, though he has a remarkable appetite, he does not thrive. Now my medicine and preventive will kill and destroy the whole family of intestinal worms and bots, of every kind and description.

Cause of Bots.—It is well known that there is a large fly, resembling the wasp (and called by some the bot fly), that is continually teasing the horse in hot weather in summer, and continually depositing its nits or eggs in innumerable quantities about the legs, neck and breast of the horse. These are taken into the stomach by his nipping and biting, and there they are hatched and transmuted into bots, which so much annoy him afterwards. Some may doubt this, and to those I would say, just try the experiment of taking some of these nits from the horse's legs in warm weather in summer, and put them in the hollow of the hand, add spittle warm from the mouth, then place the thumb of the other hand upon them and sit quietly one hour, in which time they will hatch and crawl on your taking your thumb off from them, and I doubt not if they were kept in the right temperature, well moistened, that in a few hours you might see the full-grown bot. They are most likely to trouble the horse soon after he is first turned to pasture, and when he is put up; although any derangement of the stomach

will set them at their destructive work at any time of the year.

Symptoms.—He will suddenly stop eating, look around, often bite his side and breast, lie down and quickly rise again; sometimes when down will roll quite on his back and be in great distress, for then the bot is boring into the maw or bowels; sometimes they catch hold of the straight gut, as they pass along, and work there. When this is the case the horse's motions denote the seat of pain, for he will put his nose back towards the hips and tail.

Cure.—Take as much alum as will dissolve in a quart of warm water, and turn it down the horse; and if there are any signs of their troubling him behind, give as a glyster, the same as above; after two or three hours give physic. This is the most certain remedy that can be given, and is sure to save your horse if the bots have not eaten quite through the maw or stomach. A piece of weasel skin with the fur on, the size of the palm of your hand, is also very good to make them let go; it will not kill them, but is good for inflammation, &c.

MY PREVENTIVE FOR BOTS AND WORMS.

“A word to the wise is sufficient.”

Take a strong solution of alum and wash all the parts on which there are any nits; this acts chemically upon the egg and destroys the fecundating property of them, so that they will never hatch whether they are in or out of the stomach. When you put your horse up, after the season is over for this fly, give a piece of alum, well pulverized, the size of a walnut, in his food for a few

days; this also, will destroy any that might be in the stomach, and your horse will be secure from all those things called bots, worms and grubs. And it is perfectly harmless to the horse, in every sense of the word. I have taken the maw out of horses that had been killed by bots, while the bots were still alive and at work in them, and experimented with a great many kinds of medicine on them, and found that alum water will kill them quicker than anything else that I ever tried. It may seem strange to some, and yet it is true, that it will kill them quicker than boiling water. It neutralizes the gases of the stomach in a peculiar manner, which is as destructive to the bot as though they were imbued in it.

Some may say, after this remedy has afforded immediate relief, that they must have been mistaken in what ailed the horse, because they did not see any bots or worms come from him. Let me say to those, that it is one of the peculiar properties of the stomach not to destroy or digest animal life, otherwise it would destroy itself; but this remedy kills the bots without injury to the stomach, when they are digested with the food he eats, consequently, they are not seen as they pass off. And then this remedy cuts and crisps them up in such a manner that they are never more to be seen.

CHAPTER IX.

SLOBBERING IN SUMMER AT PASTURE.

Causes.—Mr. Mason (and others agree with him) contends that it is by eating the spider web that is found so plentifully spread over our pastures. Now, if this were so, why don't they slobber at all seasons of the year when this web is to be found? They never slobber in the early part of summer, and then this web is to be found most plentifully. I contend that it is the white clover, after it begins to dry up, that causes the horse to slobber, for then it is that he commences to slobber, and, as soon as it is gone, towards fall or autumn, he ceases to do so. And then you watch the horse and see how carefully he avoids these webs, when he is feeding near them. The clover has the property of salivating them to a remarkable degree, while feeding on other green food. Sometimes horses slobber so bad when they run out to pasture, that they will grow poor, even in good feed, besides rendering them very unpleasant to handle.

Cure.—To prevent their slobbering, you must either put them up to dry food, or give them what they will eat (every day) of equal parts of pulverized alum and fine salt, which will prevent this difficulty, and also from being troubled with worms.

To Destroy Lice.—Wash the horse with a strong solution of alum, and it is an effectual remedy to destroy lice, that so much hinders the growth of colts; a strong solution of aloes is good for a like purpose, as well as a

strong tea made of cayenne pepper. It is too well known, that colts having many lice on them can not thrive well, for me to say anything about it, further than to give a remedy that will destroy them, which is the great desideratum in the case. Two washings, four days apart, is sufficient to kill the nits.

CHAPTER X.

SCRATCHES, OR GREASE.

“ Small things, make larger ones.”

This is a very troublesome disease in horses ; and unless cured immediately on being discovered, it soon renders them unfit for use, and will be the more difficult to cure.

Cause.—Exposure to wet and cold weather, fevers and the like, and not having their feet and legs properly cleaned after being driven in the mud, leaving a sluggish circulation, whereby the extremities suffer most, creating heat (fever) in the heels, &c.

Symptoms.—The legs swell, the heels look red, crack, and become very sore, and the horse is pained on being exercised ; and finally grows lamer until he is unfit for service.

Cure.—If of long standing, and bad, take from two to three quarts of blood from the neck vein ; repeat if necessary in a week's time ; give daily, doses of sulphur in small quantities, and an ounce of oil of sassafras, in

four or five doses, two days apart. This will serve to thin and purify his blood. If the heels are hot and much inflamed, poultice them with dry ginger (or wet it with vinegar). This will take out the inflammation. Then take half a pint of Boston rum, add to this an ounce of blue vitriol and two ounces of loaf sugar (which will bear filling up with the rum), as you use it, wash the heels with this, two or three times a day, until cured; shake well before using. In ordinary cases, this wash is all that is necessary to effect a cure. The green salve is also an excellent thing for cracked heels, and many other sores. It may be made by taking half a pound of hog's lard, and adding an ounce of pulverized blue vitriol: mix, and it is fit for use.

Swelling and Inflammation.—This is caused by taking cold after castration, other wounds, &c. Bind on a large poultice made of clay and vinegar, or a quantity of green burdock leaves, wilted in hot vinegar. This will sweat the parts it is applied to, and take the swelling and inflammation all out. When a swelling is going to matterate, and you want to bring it to a head or rot it, poultice it with the following (if it is not expedient to use the lance): Take warm water, shave into it hard soap, stir until you have a very stiff lather, thicken with wheat flour and bind it on the swelling. There is still another kind of poultice that is very good in some cases, but rather milder than the above. Take carrots and have them grated fine, a like quantity of charcoal well pulverized, mix them together, and then add yeast enough to make the whole pliable; to be applied warm. All poultices should be kept warm and

moist, by often changing them, otherwise they do more hurt than good.

Wounds and old Sores.—To cleanse and take out fungus or proud flesh in wounds and old sores, syringe them out with blue vitriol and rum. When this is not sufficient, lay on the fungus part scrapings of an old powder horn for a few hours, after which apply the rum and vitriol again. To heal, use the healing salve which is made in the following manner: Take honey, rosin and balsam of fir, about equal parts; add a little lard if you choose. This will be found to be first rate for healing, in cases where it does not do its work too fast.

For Burns.—Now it sometimes happens that horses get badly burned, and a burn requires different treatment from other wounds, therefore I will tell you how to heal a burn. If you should be so unfortunate as to have one on yourself, or on your horse, which you wish to heal quick, take the pussy tails that grow on the top of the blue or swamp flag, pick it up fine, then mix it with fresh lard and apply it to the burn. If this heals too fast on the surface (leaving the sore unsound underneath), then add an ounce of litharge to half a pound of the lard, simmer down a little over a slow fire, and when cold apply to the sore. This seldom fails of healing the worst of burns. When partially healed, dress the wound occasionally with sweet oil, to assist in restoring the hair.

For Stiff Joints and Callouses.—Take the bark of sumach root, put it in brandy, add oil of angle-worms, and shake well before using. Use once a day, sparingly. This is a very powerful liniment.

Here is another that is very useful, but more mild. Take eight ounces of oil of turpentine, four ounces of Barbadoes, four drachms of the oil of rosemary; dissolve in water, add two drachms of sal ammoniac, then mix all together, and apply twice a day until it gives relief.

Liniment for Bruises, Sprains and Ulcers.—Take one pint of good alcohol, one drachm of blue vitrol, two drachms of camphor gum, two drachms of saltpetre, two drachms of the tincture of gum myrrh, pulverize and mix all together, let it stand twelve hours, and shake well before using.

Here is another for a like purpose, which is a very stimulating and useful one. Take equal parts of the oil of origanum and the oil of wormwood, add sufficient alcohol to cut the oils. Good also for windgall, oselets, splints, ringbones, &c.

CHAPTER XI.

THE FEET.

“Time and the ever changing world, are the great baskets from which we pick wisdom and amusement as we go.”

I must say a few words now about the feet. In cases of old founders, corns and other wounds, caused by bad shoeing, &c., the hoofs become contracted and full of fever, which makes the horse almost a cripple for road service. To remedy this, some people stuff the feet with cow manure. This should never be done, for if you take a well horse and stuff his feet in this manner for

two or three successive nights, it will create a fever in them; but when you have occasion to stuff the feet, do it with clay well moistened with vinegar, and you may add a little spirits of turpentine; this will draw out the fever and leave the hoof in a more healthy state, which is what you desire. You can soften the hoof by rubbing on soft soap, but you should not let it touch the hair above.

In cases of old founders and contractions of the hoof, you can improve them very much, and sometimes cure them entirely, by bathing the legs with hot water every day for some two weeks; this relaxes the muscles (if the stiffness proceeds from a soreness of the chest, feed a handfull of sunflower seed during the time), and thus by using anything that will cause the hoof to grow fast, gives relief, and when you have got a new hoof, the horse will be well and sound again as ever.

You can grow on an entire new hoof in a few weeks by adhering strictly to the following directions: At a season of the year when you can obtain it (or you can make it into a salve and keep for use), gather from the field as it is growing, green wheat before it heads out; take a quantity of this and boil it in greasy pot liquor until it is thick and salvy; then anoint the hoof often with it, and for a day or two at first bind on some of it that is not boiled so much. If the above can not be obtained, use the following mixture: Take equal parts of white pine turpentine and fresh lard; melt them together, and add, before using, enough of spirits of turpentine to have it spread easy, and bathe the hoof several times a day with this, rubbing it well around the hoof and close

to the hair; melt some of the same two or three times a week, and pour it on the bottom of the hoof.

I have seen horses very lame in consequence of being corked badly in the feet, having split hoofs, &c., and otherwise disfigured by bunches and callouses. To remedy those evils, in the first place see that the wounds are free from dirt and hair, for if there is any of these left in the wound it will have to fester and work them out before it can heal, which takes much longer than to have the wound clean at the start, besides being very painful to the horse. When this has been done, then a very good application is to melt tar and tallow together, and turn it into the wound quite hot, or if you wish to use the horse, melt tallow and India rubber together; this forms a paint or coating that is impervious to dirt or water; then you may drive him every day, if you choose, without fearing any bad results from the wound, only on coming in at night you should drop a little spirits of some kind into the wound to prevent his getting cold in it. But if you are not going to use him at all, and wish to heal it faster, apply the healing salve, and you will not have any blemish left.

To cure a split in the hoof, you have only to take a sharp-pointed knife and cut through the hoof crosswise, just above the split; you need not cut more than half an inch in length; now rub on some of the hoof ointment, and it will grow smooth and sound. By observing the above rules, and seeing that your horse's feet are not injured by bad shoeing, you will do better than a great many have done before you. What is a fine looking horse good for if he has no feet?

Shoeing.—A few hints on shoeing may possibly be of some use. Some horses, that are otherwise very good ones, have flat feet (which is very objectionable), and others with very thin and tender hoofs, are oftentimes materially injured by bad shoeing. The smiths frequently pare too much off from the heel and frog of the foot, which are the natural braces and support of the foot. By paring this part of the foot away it lets it nearer the ground (that is the sensitive part thereof), and makes it more liable to get bruised on stones and other hard substances, causing corns and thrush; besides this, when it is taken off too much in proportion to the toe, it is very straining to the pasterns, often causing lameness there.

Interfering is another fault that some horses are very liable to, especially young ones, before they get spread in the quarters, because they tire quicker and do not travel so wide, and the smiths often make them worse by the manner in which they are in the habit of shoeing them, in paring too much off the heel and inside of the hoof, and making the inside cork of the shoe the shortest. This certainly throws the foot in when they take it up, instead of out, which causes them to cut the more. The hoof should be pared off most on the outside and toe, and have the inside cork quite as long, or longer than the other. This throws the foot out, and they are not so likely to strike the other with it while traveling; they seldom strike with the cork, but generally with the sporn, or side of the shoe; although the paring on the outside should not be done to that extent as to turn the foot so much as to strain or otherwise injure the joints above. Much has been said and written about the form of the shoe, but

much more depends on the manner in which it is set than the form thereof. But I will not dwell on this point, as it is not my trade; and yet I can not but wish that every horse shoer was a good farrier, or at least understood the feet better than they generally do. More will be said on this subject hereafter. The horse that does not interfere before he is shod should not afterwards.

To take off Wind Galls.—Wash often, until the puffs are gone, with blood root steeped in vinegar; or use oil of wormwood freely until it has the desired effect. It may sometimes be necessary to lay on a little blistering ointment, and bandage tight as you can and not pain the horse.

CHAPTER XII.

“What is worthless, dies—what is pernicious, sickens, faints, and has no influence—while the wholesome and sound, the just and true, lives.”

FOR SPRAINS, BRUISES, BITES, AND SWELLINGS ON THE LEGS.

In recent injuries of this kind on the legs, as well as in rheumatic difficulties in the legs, and sometimes in the back, the horse has no power to raise the limb or throw it forward at all. Now why is it so? The muscles are as strong and powerful as ever, and still he has no use of the limb.

I must be allowed to introduce a comparison here to illustrate this idea. Supposing you were in Albany, and wished to send a telegraphic communication to Utica; but the wire being disconnected at Little Falls (which is

situated between the places above spoken of), you may keep sending in vain, without getting a reply from the Utica folks. Why? The telegraph wire is broken and all communication between the two places cut off.

The brain of the horse (as well as that of man) is the great battery, or source of every motion of the body and limbs. The nerves are the telegraph wires, running from the brain to every part of the body susceptible of motion; thus, he wills the foot to move, and it does so (and not till then). But when the nerves are injured in any way, so that they do not perform their proper office, the telegraph wire is broken as it were, and the nerves, together with the cords and muscles, lay dormant and inactive. When you restore the nerves to their wonted office, which is to convey intelligence from the brain to every other part, the whole machinery is set in motion again as before. I have seen the nerves affected in this way by the bite of dogs, and often by corks and taking cold. The safest, the surest, and the most speedy remedy for this is the following:

Cure —Wisp up hay or straw into a kind of rope, and wind the leg with it from the hoof to the body (or above the swelling if possible); then let a stream of cold water run in at the top of this, and next to the leg, for an hour or two, or until you create a perspiration; then rub the limb until nearly dry, remembering to always rub a swelling of any kind towards the extremities. This will take the swelling and inflammation entirely out; after which wash the parts with wormwood steeped in vinegar or camphorette spirits, which is all that will be necessary in most cases of this nature. Yet should it ever

fail of having the desired effect in full, all you have to do then is to apply to the limb what may be found in the after part of this work, under the head of *Lightning Liniment*, which will perfect the cure.

To destroy Lice on Colts.—It is well known to every farmer that horses or colts can not thrive well if they are lousy; and it will only be necessary for me to prescribe a remedy that will effectually destroy them. This can be done by washing every part of the horse affected with the vermin, with a strong solution of aloes, and giving him a spoonfull of sulphur for a few days. But it will be necessary to repeat the washing after about four days, and perhaps a third time, in order to destroy those that were not hatched at the first washing. Alum may also be used for this purpose, with good success; and if you could be sure of touching every louse and nit with this last wash, one application would be sufficient; but the thick coat of hair on colts will prevent this. By being thorough with either of the above, you will in a very short time improve his condition, increase his growth, and thereby enhance his value. Then you can dispense with the use of unguentum, which is so poisonous, and the snuff and oil, and the tobacco, which is so weakening and sickening to your animals.

BLIND STAGGERS, OR APOPLEXY.

This is a very dangerous disease, and the horse often dies with the first attack.

Symptoms.—He reels and generally falls; if he survives and gets up he sometimes appears very weak, reeling as he goes; while at other times he will be very

reckless and mad. The cause is too great a determination or rush of blood to the head, thus affecting the brain, and causing the above named fits.

Cure.—Immediately on seeing that he has a fit of this kind, take a gallon of blood from the neck vein; also split the skin of the forehead two or three inches in length up and down; peel the skin back a little, and fill the wound with fine salt and pepper; then close the wound, and keep it so by means of two or three stitches. Moderate exercise in the open air will not hurt him, if the weather should be favorable. After about ten hours, give nearly a pint of linseed oil, adding half an ounce of saffras oil. Should he become costive after the operation of the above, give small doses of sulphur for a few days, and let his food be simple and digestible.



CHAPTER XIII.

The philosopher Dan says, if a man is poor, all he has to do to become rich, is to reverse the action by increasing his income, and diminishing his outlays. This applies, with the same force, to diseases. Reverse the action by removing the cause, and nature will do her work again; and health is restored.

HORSE DISTEMPER.

This is a disease that all colts are liable to, and it is also very contagious; but if attended to in time, it can be cured without much trouble, or any bad effects arising from it, and even without their swelling and breaking

in the throat at all, which often causes thick wind. The swelling and breaking in the throat, leaves a callous where the opening in the throat existed (more to the injury of the horse when it breaks on the inside); then by checking the horse up, there is not room for the wind, and he wheezes, but as soon as he stops and is unchecked, he breathes easily again.

As a preventive for distemper, give daily doses (in small quantities) of gum asafœtida, and about twice a week, a spoonfull of sulphur.

The character of this disease may be ascertained by the horse being troubled to drink unless it is held up to him, and having what some call a dry or tight cough.

Cure.—First, bleed freely; then take a piece of cloth large enough to double several times, leaving it some six or eight inches square; wet this in cold water and salt, and bring it closely up to the jaws and throat, and fasten by means of a bandage running over the head and neck; change it often for one newly wet; keep the bowels open by feeding sulphur or aloes in bran, together with a small quantity of asafœtida, and you will have no further trouble. But if he should be neglected until he refuses his food, and his throat is badly swollen, it will be necessary to bleed copiously, and apply hot fomentations (of bitter herbs) to the throat, which will prevent its breaking on the inside, and often effect a speedy cure.

BLACK TONGUE.

The celebrated veterinary surgeon, Richard Mason of Virginia, strenuously recommended the constant use of the

gum asafœtida in this dreadful disease, as a preventive of this, as well as other contagious diseases; and further says, he owes his success in preventing and curing this disorder, to the constant use of this drug. The value of asafœtida, as a medicine for the horse, has been but little known; but where it has been once properly used, its remarkable effects will prove this observation correct. It acts as a stimulant, antispasmodic, expectorant and anthelmintic, while its action is quiet and penetrating. Where a small piece of asafœtida has been placed in the manger of a horse that was in health, I have known him to occupy a stall for months adjoining one in which was a horse affected with a contagious disease, without being in the least affected, or any ill consequences resulting therefrom.

Preventive.—Take one ounce of asafœtida, divide into two parts, wrap them in clean linen rags, and nail one of them in the bottom of the bucket from which the horse is watered, and the other in the manger where he is fed. A small piece confined to his bit when he goes from home, will act as a preventive against taking colds and all contagious diseases.

Cure.—When the disease has commenced, take one pint of castor oil, one ounce of balsam copaiva, one ounce of sweet spirits of nitre; let these ingredients be well mixed in a bottle and given.

A Wash for the Mouth.—Take one pint of vinegar, four ounces of alum, a piece of verdigris as large as a common sized bean, and a handfull of sage; let the sage be steeped in a pint of warm water, in which also dissolve the alum and verdigris. Use this as a wash

for the mouth, two or three times a day, until the cure is effected.

THE USE OF BLANKETS FOR THE HORSE.

An ounce of preventive, is worth a pound of cure.

The great difficulty with the horse, in this respect, is the liability he is subject to by sudden changes from heat to cold, and from cold to heat; and when a horse is very hot, or very cold, he should be allowed to come to his natural feeling and warmth by degrees, for he is as often injured by being too hot, as by being too cold. Now a horse should never be driven until he is warm and sweaty, and then allowed to stand in the cold wind (with or without a blanket) until he gets chilly. Blankets are very necessary and useful if properly used, but, if not so employed, they had better not be used at all. Some people do great injury to their horses with them, while intending to benefit their horses; for instance, when a horse has been driven until he is quite hot, they will, immediately after stopping him, put on a blanket, and sometimes two or three, or perhaps a buffalo robe; this confines all the sweat and steam to the body, which is very injurious to the lungs, &c., often causing the horse to take cold, and leave him with a settled cough—and thus they kill him with kindness; but when a horse comes in heated in this way, he should be well rubbed, and allowed to stand until the perceptible evaporation has nearly escaped from the body, and then covered up with a good blanket before they begin to feel cold; they will thereby be benefited, and saved from many diseases that arise from an untimely use of the blanket.

To prevent Flies from teasing Horses.—Take sorrel leaf, about in the proportion of tea, and steep in water. Clean the horse, and then, with a sponge, wash him thoroughly before going out. Walnut leaves or pennyroyal soaked over night, then boiled, and applied in the above manner, will answer a like purpose.

Warts.—Colts, while growing, sometimes have warts come on them, which very much disfigure and hurt their looks, if they do not otherwise injure them. I have known the owner of one of these animals say he would give ten dollars if he knew how to take off that wart, and not hurt the horse. My remedy will not cost you ten cents to take off the largest wart you ever saw.

They can be removed thus: take a quantity of ash bark off the tree commonly known as the swamp ash, which, on being reduced to ashes, and applied once in twenty-four hours, wet, in the form of a poultice, will in a few days remove the excrescence; in repeating, the ashes covering the wart should be carefully removed by washing it with soap suds made of hard soap; when it is eaten entirely out, then dress it as you would any other wound, to heal it up. This is much safer than to use the knife.

CHAPTER XIV.

FOR WEAKNESS ACROSS THE LOINS, OR DERANGEMENT OF THE URINARY ORGANS, AND GRAVEL OR STONE IN THE BLADDER.

In cases of this kind, people are very apt to mistake, or err in judgment, as to the real cause of the animal's

pain and difficulty, for it requires a pretty thorough knowledge of the diseases of the horse, to distinguish this from some other complaints. In ordinary cases of this nature, however, there will be an apparent weakness and stiffness of the hind parts, not unfrequently accompanied with a general tremor or trembling of the whole body. This perhaps would not have occurred, if the horse had eaten a small dose of rosin in his food at any time within a week previous to his being taken, which in all probability would have served as a preventive. And in many cases, this is all that is required to set him right afterwards; although it may be necessary sometimes to do something more for him, which depends upon what and where the difficulty is.

The causes are various that bring on these difficulties. It is sometimes caused by the horse being either strained, heated, or over-doing, and then taking cold, which settles across the kidneys—causing inflammation there, while the water will look quite red. When he continues in this way any considerable time, without finding relief, the organs, which he opens and closes at will, become irritated and swollen, so that they do not perform their office. The passage often becomes closed so that he urinates with great difficulty, or not at all—or, in other words, the bladder does not contract sufficiently to void the urine, which increases the inflammation, and causes them to swell and become very sore, and the animal is in great pain, making frequent efforts to urinate, and if he voids any it will be very red or blackish. It is sometimes brought on by other disorders that have

been imperfectly cured, and have left impurities of blood, that must in time destroy the horse, or work itself out by way of the urine, the kidneys being the organs by which these fluids are secreted; and sometimes these organs are powerfully operated on by the sympathetic affection of other disordered parts; hence we see the water look muddy or milky, and the sediment thereof will contain numerous red and yellow particles, which, by the secretive organs not doing their work properly, cause (though not very frequently) gravel, or stone in the bladder as it is called.

The symptoms are, great restlessness and pain, stoppage of urine, with fits or spasms, cold ears, and generally slow but strong pulse.

There are various things that operate powerfully upon the water, of which I will mention several that may be employed with good success. It is not always that one medicine will suit or cure all diseases of this nature. They are often as differently located as they are derived from various causes, &c.; sometimes the difficulty is wholly in the kidneys, and may not be anything more than inflammation; and it may be gravel lodged between the kidneys and bladder, or in the bladder itself; and again it may not be in either of these places, but arise merely from inflammation in the neck of the bladder and glands. So you see that one medicine is not likely to reach every case under all these varying circumstances.

By introducing the hand into the rectum, if the bladder is found to be full and hard, there is inflammation of the neck of it; if it is empty, yet on the portion of the intestines over it there is more than natural heat and ten-

derness, there is inflammation of the bladder; and if the bladder is empty, and there is no increased heat or tenderness, then there is inflammation of the kidneys; so, also, if there be stone in the bladder, it may be felt by the hand, by throwing the horse and turning him upon his back, as it falls down on the rectum.

Most commonly the horse does not require strong or often repeated diuretics, unless the object be to wash out the bladder and clear it of gravel and other obstructions, and even then they should not be continued long at a time; for, by so doing, you excite the kidneys to overaction, whereby they secrete an undue proportion of real blood with the urine, which is more injurious to the horse than direct bleeding.

Cure.—In the first place, give a spoonfull of pulverized rosin, in honey sufficient to ball it, or the whole may be dissolved in a quart of warm water and given as a drench; also give him a portion of salts, adding a spoonfull of cream of tartar. If he should not get relief from this within a short time, or if the animal is in great pain and restless, commence immediately, after giving the medicine, to place hot fomentations over the kidneys, of bitter herbs steeped in vinegar, or salt and water, repeating them often, and keeping them hot for several hours; do not leave the back wet and uncovered afterwards, but rub dry with a hot flannel cloth. This will ease the pain of the animal, and help the operation of the medicine.

When the above is not convenient, or is deemed not sufficient, after a reasonable time for it to operate, you may give either of the following (continuing the fomentations as before): Any of the various kinds of melon

or pumpkin seeds, steeped to a strong decoction, one pint, adding half a pint of good gin, unless the disease is decidedly inflammatory; or you may give balls of the pine turpentine, or dissolve this in gin also; or balsam of copaiba, or balsam of fir. A tea made by steeping the boughs of the latter, is also very good for the water (as well as for a cough). The tea made from the boughs of the common hemlock, is good for a like purpose; or, if these are not at hand, and the inflammation is not very great, one ounce of spirits of nitre may be given for a dose, with good success; or you can give the urine balls, as directed in numbered recipes.

The above is deemed sufficient for all ordinary cases of inflammation of the kidneys, and stoppage of urine. But in more serious cases, with gravel or stone in the bladder or intestines, bleed — if the horse is in good condition and the pulse strong, the fomentations as above will still be useful; or, by boiling up a good lot of tobacco, and applying hot, you have the benefit of the hot water, together with the laxative property of the tobacco, and a pint of this may be injected up the rectum, which will relax and cure the spasms that are the cause of the animal's agony. You should give the following drinks until relief is obtained. Take a quantity of the stalk of the wild bulrush, which is common in most parts of the country, and sometimes used for scouring purposes; or of the root of the plant commonly known as the Indian gravel weed, which is found in low and marshy ground; boil either or both of these together in a kettle, and give the horse a pint, two or three times a day, of the tea, adding a little gin, and also a spoonfull of sup. carb.

soda, once a day. This will be most likely to cut and dislodge the gravel, and relieve the horse from his suffering; if not, try the remedy given under the head of Lithontriptics.

Cribbing.—This is more a habit than a disease, and is generally acquired while young in consequence of cutting teeth, which causes pain in the gums and jaws. This habit, once acquired, he does not forget after teething, but continues to grow stronger with age. To effect a cure only requires to hitch him in the middle of the floor and high up, so that he can not bite anything, till he forgets this habit, which will not require many days to accomplish. He should be fed from a basket hung on his head, during the time.

Choking.—It sometimes happens that a very greedy horse gets choked while endeavoring to hog down dry oats very fast. A quantity of oats get lodged in the throat of the animal; being unable to swallow them, if he does not throw them up immediately, they soon swell and become so hard that he can not get rid of them by any effort of his own, and he must die unless relieved.

Cure.—When this first happens, if he does not throw them up in a few moments, take a round stick as large as you can get in his mouth crosswise, and tie it in by means of a string at each end running over the head; and if it is possible for him to throw them up by coughing he will do so; if this does not have the desired effect, then hold his head up as high as you can, turn into the mouth a strong decoction of tobacco, and make him swallow if possible. This sickens him and relaxes the muscles to that degree that it will give immediate re-

lief. I once knew this to cure a horse that had been suffering in this situation for two days, and was very near dying; but was relieved in a few minutes by giving the tobacco.

SWEENY.

Symptoms.—The horse is lame in one of his fore legs. You should examine his shoulders carefully, and if he is sweeny, the shoulder on the side he is lame in will be shriveled and not so full as the other, commonly about four to six inches below the withers, and will continue to decrease as the lameness increases. This is often caused by keeping the horse checked too long and too high; by raising the neck too high, strains on the shoulder blade—which causes too much friction of the parts. It is sometimes caused also by allowing the horse to pull in too wide a collar.

Cure.—Rowel the shoulder where it is fallen in—some three or four inches in length. A tarred rope is best to create inflammation, as it will do it sooner than almost anything else. Leave it in about ten days, occasionally washing the shoulder with camphorette spirits, and let the horse have entire rest. But if he is to be worked during treatment for this difficulty, dispense with the above, and follow the directions given in recipe No. 81.

CHAPTER XV.

Those who touch vermilion, become red; and those who touch ink, become black. So people take their character from the class of horses they keep; then who could wish to keep or drive an old blind horse.

THE EYE.

The eye is a very necessary and useful organ, the loss of which very much lessens the value of the animal; and when he loses both he becomes worthless. To describe all the various liabilities that the eye is subject to is unnecessary. The eye is said to be the organ of sight, and in one sense it is; and in another sense of the word, the brain is what sees, or divines things after all; and the eye the organ that conveys the idea of shape, color of objects, and intelligence to the brain. It is very complicated in its structure, and withall a very sensitive organ, and very liable to injuries from blows, whips, and many other accidents. Whenever a wound is inflicted on or about the eye, it causes inflammation sooner than on almost any other part, owing to its great sensitiveness; and when it is inflicted on the eye itself, or its surrounding parts, it not only becomes inflamed, but it leaves what is called a film on the eye, which is merely a thickening of the fluids that are calculated to lubricate and clear the eye from dirt accidentally entering it, which render the sight more keen. Now you need not be alarmed about this, for when it is caused by a wound or inflammation, it is as necessary to the eye, before it can heal and get well, as the scab is on any flesh wound be-

fore that can heal. Before I proceed further, I will give you the treatment to be observed in this case, in order to effect a speedy

Cure.—If necessary to allay the swelling and inflammation by depletion of the parts, do it by opening the vein at the corner of the eye, or bleeding in the nose (for which directions will be found in another place); physic, and the diet should be light and of a cooling nature; bathe the eye and temples often with cold water, until the inflammation is subdued; then if there should be any film on the eye, take fresh butter or lard, and dress it in the following manner: take it on the end of your finger, and after chafing the temples, &c., you can fill the eye with this dressing easily, do this once a day until the film disappears, which will not be more than a week at longest; and, generally speaking, one or two dressings will be sufficient.

There are other causes of blindness, one of which is commonly known by the name of hooks or haw of the eye. Much has been said and written on this subject, and some of the old masters have contended that the film or cataract, in case of hooks, was a thickening of the second membrane of the eye, and used to resort to (what they called) a surgical operation of the eye to remove it, by which many a valuable horse has been sacrificed; while others have described it thus, which I think approximates a little nearer the truth; they say the horse has a membrane, peculiar to the animal, which is drawn at pleasure over the eye, to clear it of dirt accidentally entering it, the enlargement of which, by inflammation, produces what is called hooks. You have now only to

listen a few moments, to learn what my views are in relation to this membrane, and disease of the eye.

The fact is, that instead of this membrane, as it has been called and described above—the horse has a tube or sack (which answers a similar purpose to the eye, as the oil sack found on the rump of fowls does them, that we often see them oil their feathers from), that is situated in the corner of each eye, and from which oozes, by the motion of the eye, a liquid or oily substance, which tends to moisten the eye and render the sight more keen and nice, as well as to assist in clearing the eye from dirt accidentally entering it—and also another tube which conveys the tear, as I shall call it here, to the nose, &c.; and whenever these tubes are closed, or an even flow of the matter therein contained is checked, by inflammation or fever, as they often are, the eye looks glassy, or has the appearance of film. The primary causes, however, are various, as being kept in dark stables, and then led out to a full glare of light; filthy and ill-ventilated ones, where the horse is obliged to stand enveloped in the gases that arise from the excrements, &c.; with many others that might be mentioned; and one of which is, the horse from two to six years of age is subject to have what are commonly called wolf teeth, which come in front and close to the grinders, and in fact is one, of those they shed, of the upper jaw; and is a small round tooth which sometimes causes blindness by the pressure on the nerve leading to the eye. The blindness caused in this way come on more gradually, however, than when caused by inflammation. So whenever the sight becomes dim or imperfect (at this age), it will be well

to examine and see if he has these teeth, if so, pull them out; for there will be no harm done, if this be not the cause.

Cure.—For hooks, if the cause does not proceed from the teeth, it only requires a strict adherence to the rules given above for film; applying mullein oil occasionally to the eye. A very soothing and beneficial wash for the eye is made by mixing honey and rose water; or if there is much inflammation of the eye or surrounding parts, anoint about the eye and temples with an ointment made by simmering the blue flag root in lard. The use of the lard, or these oils, supplies the deficiency of the natural fluid, or oil of the eye, and thus assists nature in restoring the organ to health, and in removing the film; which accounts for the beneficial effects of those articles.

A blind horse (or one partially so) in both eyes, by any defect or disease coming on, will usually keep his ears in constant and rapid motion; and on being led from the stable into a stronger light, he will raise his head and squint alternately; which denotes weakness or disease of the eye. And if entirely blind, or nearly so, he will lift his feet high, as though he was going to step over something, when really there is nothing to obstruct his passage, and there will be an evident uncertainty where he is going to put his feet down. But when the blindness is confined to one eye alone, there is little or nothing of this characteristic gait to be perceived. And the loss of one eye only, does not materially injure him for ordinary business.

In cases of confirmed film or cataract of the eye, there have been various remedies employed for their removal,

and generally with ill success. Some have used for this purpose, chalk, salt, ashes, vitriol, and even pounded glass; the effect of which is only to recall the inflammation previously attending it, and is utterly barbarous. But when you are determined to kill or cure, I will tell you of a remedy that is better and more certain to effect the object, although it may seem to you as barbarous as the former. There is this consolation about it, it is of less duration; and the very moment it has done its work you can relieve the animal from further pain, and he enjoys his sight again; and then again there can nothing give pain to the eye itself, until it penetrates the cataract.

Cure.—Fill the eye, by means of a quill, with strong and newly slackened lime. Let it remain in the eye until the film is worked up sufficiently to be removed (which will be but a few minutes), then remove it, together with all the lime and dirt that may be in the eye, by means of a piece of soft sponge, wet in sharp vinegar. This kills the life of the lime at once, and prevents it from doing further injury, and the film is off. If this should create any inflammation, observe the above rules—that is, wash often with cold water, occasionally applying hen's oil, or any of the above, to prevent the film from returning.

There is still another species of blindness, which is commonly known as being moon blind, which has never been satisfactorily accounted for; it appears, however, to affect the sight of the horse mostly in the night, and its periodical returns has led many to suppose that it was influenced by that planet; but I can see no good

reason for coming to any such conclusion. I think it must be brought on either by inflammation or fevers, imperfectly cured; or its origin can be traced to some of the foregoing causes of blindness; or else it must originate from some natural defect of the organs of sight, for which there is no remedy. Notwithstanding, if you should become satisfied that it arose from the effects of any other disease, as too great a determination of blood to the head, or concussion of the brain, or any other derangement of the system, I would recommend lowering and equalizing the circulation of blood, by bleeding, and giving him a cooling diet, at those periods when he was most affected with the disease.

LOSS OF APPETITE.

I have been frequently asked what is good to give a horse an appetite, the owner adding, my horse don't eat good, &c. Now, this is owing to a want of change in the animal's food, dirty manger, mouldy fodder; or is the forerunner of some disease that will soon make itself known by the symptoms thereof. If any of the former, remove the cause immediately. He may or may not, need a mild dose of salts; but he should have salt to lick regularly, and have a little asafœtida placed in the bottom of his manger, or on his bit. Either of the following has a tendency to whet the appetite, and give relish to his food. Give him a little cayenne pepper in his food; or give him horse-radish roots grated fine, in his food, of which he soon becomes very fond; or you may give him a spoonfull of pure, ground mustard, in a like manner, for whatever assists the digestive organs, im-

proves the appetite. It is not what we eat that makes us strong, but what we digest.

When you have done this, give him clean oats and hay,
And he will no longer be troubled in this way.

THE LAMPASS.

Cause.—Cutting teeth and indigestion in young horses; and in old ones, it is owing to the teeth being worn off short and uneven, whereby the mouth is irritated and becomes swollen in the effort to masticate his food.

Symptoms.—Swelling of the mouth and palate; and he eats daintily, in consequence of the gum being below the teeth.

Cure.—Bleed in the mouth, by pricking several places in the gum, just back of the pincher teeth, with a sharp pointed knife, and give physic. If this does not have the desired effect, then sear them down with a red hot iron; burning the lampass just below the level of the teeth, being careful not to let the hot iron touch the teeth, nor to burn the gums but very little below the face of them, for by so doing you cause a hole after it heals up that will always make him drop his grain while eating, more or less, through life. They should never be hooked out deep with a hot iron, as some have been in the habit of doing. After they have been properly seared down, the horse should have salt and bran to lick every day until it has healed up, and he will improve in condition with remarkable rapidity.

CHAPTER XVI.

THE PULSE, INFLAMMATION AND BLEEDING.

The vessels which carry the blood from the heart, are called arteries; and the vessels that convey the blood back again, after it has been carried to the different parts of the body by the arteries, are called veins. The yielding of the artery to the gush of blood forced into it by the contraction of the heart, constitutes the pulse. It is a very useful assistant in determining the nature and violence of disease; and in order to be benefited by its motion in disease, it is necessary to know how often it beats in health. The number of pulsations in any artery will give the number of beatings of the heart, and thereby denote the irritation of that organ, and the system generally. A common sized horse when in health, pulsates from thirty-six to thirty-eight in a minute; and smaller ones forty and over per minute. This is considered to be the standard pulse of the horse. When it does not beat much oftener than this, there can not be anything very serious to contend with in the form of inflammation or fever.

The number of beatings may be ascertained by holding the hand on the side, or on the plate vein; but this is not all we would like to know; in order to ascertain the quantity of blood, and the manner in which it flows through the vein, which is very essential, we must press the artery against some hard substance. The most convenient place to feel the pulse for this purpose, is at the lower jaw, a little behind the spot where the submaxil-

lary artery and vein, and the parotid duct comes from the under jaw. There the number of pulsations can be easily counted, and the character of the pulse, a matter of equal importance, be clearly ascertained. When the pulse beats from fifty to fifty-five, there is considerable fever; and when it reaches from seventy to eighty, it indicates a dangerous state of affairs. Few horses long survive a pulse of one hundred; for, by this excessive action, the energies of nature are speedily worn out. A quick pulse indicates irritation and fever; a slow pulse accompanies every malady connected with a difficulty of nervous energy. The heart may not only be excited to more frequent, but also to more violent actions; then we have the hard pulse, the sure indicator of considerable fever, which warrants the immediate use of the lancet. Sometimes the pulse may be hard and jerking, and yet small; the stream, though forcible, is not great; the heart is so irritable that it contracts before the ventricle is properly filled; this indicates a dangerous state of disease; it generally accompanies inflammation of the bowels, &c. A weak pulse denotes a feeble action of the heart, and is expressive of great debility, when the horse should not be bled on any account. The oppressed pulse is when the arteries seem to be fully distended with blood, without that distinct pulsation as in health. There is obstruction somewhere, and the heart can hardly force the stream along, or communicate pulsation to the current. This is the case in sudden inflammation of the lungs; they are overloaded and gorged with blood, which can not find its way through their minute vessels. This accounts for copious bleeding being so beneficial in this

disease. By increasing a pulse previously oppressed, a portion being removed from the distended and choked vessels, the remaining blood is able to flow on.

Inflammation.—Is either local or general. When local, it makes itself known by redness, swelling, heat, and pain, and should be allayed by equalizing the heat and circulation of the system; increasing the internal heat, and cooling the external with soothing and sweating applications. It does not generally become necessary to bleed for local inflammation unless it be of some important organ, as the brain or lungs; but if it should become necessary, as of the eye, feet or legs, I would do so at the most convenient place nearest to the inflamed part, for this will benefit the horse and the part diseased more, even though you do not take one-fourth part as much blood as you would by a general bleeding. (See directions for local bleeding, &c.)

When inflammation becomes general, it must be preceded by some considerable degree of fever, which accompanies it. Bleeding may be needed in the early stages, or may not, which must be decided upon by the one in attendance, as it would be very difficult to lay down a general rule here, that would be applicable in all cases and under all circumstances. If the object is to merely diminish the momentum of circulation, you can do it by this quicker than by any other means; but it is always safest not to hazard too much by so doing.

BLEEDING.

This is an important operation, and should be done with nicety and skill. It is performed with a fleam or a

lancet, the fleam being the most common instrument in use, and the safest, in unexperienced hands. However, the spring fleam is preferable to any other instrument for this purpose, especially for general bleeding. It is so constructed that it may be set so as to cut any desirable depth, to suit a thick or a thin skin, while it obviates all difficulties arising from the vein rolling, by the animal's starting, &c. And then you can dispense with the blood stick and blindfolding altogether, and the incision is made with more certainty. When inflammation rages, whether it be local or general, and we can not lower the circulation by giving medicine, bathing or sweating (as in the human), from one to four quarts of blood may be taken with safety, but not more than about one gallon should be taken at once, unless in extreme cases, and it should be made to run freely. For general bleeding, the neck vein, or jugular, may be selected (it being the most convenient), about two or three inches below the union of the two portions of the jugular at the angle of the jaw. The incision should be made in a straight line with the artery, and care should be taken not to cut through the opposite side from which you make the incision; after bleeding, equal care should be observed to bring the margins of the wound together without pulling the skin out so as to leave a space for the blood to fill, which is sometimes attended with bad consequences. Put a sharp pin through the centre of the wound, and close to the edge of the skin, then wind around the inside of this, tow or hair from the mane sufficient to stop the blood; bathe the parts with cold water, and when united sufficiently, withdraw the pin.

Youatt, who is good authority, says the operator should catch the blood in some vessel for that purpose, in order to be able to judge as to its quantity and quality. If after it has coagulated, a light buff colored jelly forms on the surface, and the crassamentum or coagulated lymph is of a dark brown color, instead of red, it is an evidence of the inflammatory state of the blood, which warrants a second bleeding, after a sufficient time to know that the first did not have the desired effect. Blood drawn from a healthy horse very soon coagulates and appears like uniformly red jelly, with a small quantity of fluid resembling water floating on the surface that consists of two parts—the red jelly, termed crassamentum, and the water or serum. “The former may be separated into two parts, by washing the red globules, and the coagulated lymph, although this may not always be a certain criterion to go by.” In extreme cases of inflammation, the state of the pulse should be carefully regarded during the operation of bleeding; the most experienced can not tell what quantity of blood to take to produce the desired effect; the change of the pulse alone will indicate when the object is accomplished. The operator should have his finger on the artery during the act or time of bleeding, and, comparatively regardless of quantity, continue to take blood until (in inflammation of the lungs) the oppressed pulse becomes more distinct.

For local bleeding, the operation is simple, and yet requires to be done with equal nicety and skill; for it is generally to be performed with a lancet, or sharp pointed knife, the use of which is even more difficult than that

of the fleam. In local diseases about the head or eyes, the angular vein near the corner of the eye is a convenient place, or the nose and mouth may be selected; if you would like to take blood from the mouth, the third wrinkle from the incisor teeth may be chosen to advantage. From the nose, it may be obtained by taking hold of the upper lip with one hand, and with a sharp pointed penknife in the other—running it quite through the septum, just below the nasal bone; striking the artery that leads to the extremity of the nose; you will find no difficulty in getting all the blood you can desire. If he should bleed too much, however, you have only to tie his head up high for a short time, and it will stop.

For inflammation in the shoulder, or surrounding parts, select the plate vein as it comes from the inside of the arm and leads up towards the bosom; if behind, take the corresponding one on the inside of the thigh, or tap the same on the flank or abdomen, as the case may require. For contraction of the muscles of the legs, &c., or fever in the feet, select the feet and fetlock.

There is this consideration about bleeding, that is worth keeping in view. It has become a settled principle in the animal economy (and by good authority), that by bleeding the process of inflammation can be checked or suspended for a while; although it may return, it is never with the same degree of violence as before, and in many cases it is got rid of entirely by a timely bleeding.

FEVER.

There are two kinds of fever to be noticed here, which I will describe in the language of my predecessors, viz:

The first is pure or simple fever, which is generally increased arterial action, either without any local affection, or in consequence of the sympathy of the system with inflammation in some particular part. The second is sympathetic, and is increased arterial action, proceeding from some local cause; the treatment of which will be the same as that of other fevers, except that particular attention should be paid to the state of that part originally diseased. Fever is heat of the parts to which it appears, or of the whole when it becomes general. The immediate causes may be seen by the foregoing description; and horses are subject to but few disorders which are not accompanied with more or less fever. Fever of parts may be occasioned by blows, strains, kicks, or wounds of any kind, the remedies of which will be found in another place. Fever of the whole surface often occurs by reason of taking cold, when the internal organs are cold and inactive, and then the pores of the skin will be closed, dry and hot. Why? Because perspiration is checked, the primary causes of which may be seen by reading the chapter on colds, &c. This should be carefully guarded against. The remedies also for the same may be given, with a diaphoretic, which will equalize the circulation, and set the whole machine in good working order again. Fevers of this kind are generally caused by colds, for cold is the opposite of heat, and heat is fever. Fever may degenerate into inflammation, and concentrate on some important organ, as the brain, lungs, midriff, or bowels, and kill your horse; but no horse ever died of pure fever alone.

Symptoms.—After the fever has become general, the

horse will be seen to range from one end of his rack to the other, his flanks work more than in health, the eyes look red, his breath is hot and smells; he drops his hay after chewing. But there is no pawing, and generally no cough, nor looking around to the sides. The pulse is quicker than usual, by counting which the degree of fever may be determined. In cases of pure fever he sometimes has a shivering fit which returns at nearly the same hour every day, and lasts for several days, or until local inflammation appears, or the fever subsides; his urine is very red, and he stales with difficulty, the excrement being small and often slimy, as in inflammation and canker of the bowels, attending fever; one leg being hot and the others cold, or one being cold and the others hot, indicate a degree of fever.

Cure.—In the early stages of fever give the following drinks as directed for colds, viz: the hot drops, or cayenne pepper tea; this drives out the cold by increasing the inward heat. Give diuretics to promote the urine, and diaphoretics to create perspiration, for these are the two principal outlets by which relief is to be obtained; and when not relieved in this manner, bleed freely for fear of its running into inflammation; after this, give frequent drinks of tea made by steeping the tops of the common spearmint, or of bee balm, adding a little camphorette spirits.

CHAPTER XVII.

The all-wise Creator—the author and preserver of the universe—so arranged matters that is natural for ice to rise and float on the water. Had it been otherwise it would have sunk to the bottom of the stream, and continued doing so until it would have destroyed this beautiful world of his. And he has not been less benevolent with the creatures he has placed here. For, unless they abuse the laws of nature, either in producing or in the treatment of disease, there is a balance of power left in their favor.

DERANGEMENT OF THE STOMACH AND BOWELS.

The stomach sometimes gets disordered and becomes inactive, by eating improper food and being overloaded, which overtaxes its capacities for digestion; and is this to be wondered at? It causes a slight degree of fever, and irritation of the parts, &c.; and sometimes occasions cramp of the stomach, which is often taken for colic.

Symptoms.—Great drowsiness, low pulse, cold ears, easily fatigued, causing either looseness or costiveness of the bowels.

Cure.—If the former prevails, take a large spoonfull each of peppermint essence, spirits of camphor, and ground mustard; put them in a pint of warm water, and turn the whole down the horse. Or, if this be not at hand, give him two spoonfulls of pulverized charcoal in the same quantity of water; if this medicine requires to be repeated, add a spoonfull of the tincture of laudanum; but if the bowels are in a state of costiveness, after giving

the above, give physic, clothe warm, and rub the legs well, not forgetting to regulate the food according to the demands of the stomach.

WIND COLIC.

Symptoms.—The horse is very restless, often lying down and then starting up again; he will strike his belly with his hind feet, refuses to eat, and generally bloats unless he finds relief.

Cure.—Take a piece of white chalk the size of a small hen's egg; pulverize this and put it in a quart bottle; and when you are ready to turn it down him, fill the bottle up with good vinegar, and let the horse drink it immediately. The effervescence of these two ingredients is such that the bottle will not long contain them after being mixed. After the operation of this medicine (which will not be long, for it is pretty sure fire), it will be well to give the horse some stimulus, or warming medicine, such as whiskey and pepper, or add to his food a little mustard or ginger. The chalk and vinegar are not beneficial so much for their purgative properties, for they contain none, although the horse seldom retains them much longer than the bottle does; but it neutralizes the gases of the stomach and bowels, which are the cause of the bloat and distress that attend them in this complaint. It generally has about the same effect when the horse is in trouble in consequence of eating too much Indian meal which has baked in the maw, &c., which has destroyed great numbers of them in this country; it neutralizes or loosens the whole mass, and thus gives relief.

BILIOUS OR INFLAMMATORY COLIC.

Symptoms.—This kind of colic, besides most of the former, is accompanied with fever and great heat. The horse sweats and pants, the mouth is dry, and he appears to be in great distress, without those intervals of ease that generally accompany other colics. It is caused by a cramp or contraction of the tube that conveys the bile from the liver to the stomach and intestines, and is a very dangerous, as well as distressing complaint. Some people have thought heretofore that the horse had no gall bladder, because they did not see any on the liver; if they will take the trouble to cut that organ open, they may find one inside of it. This shows the great wisdom of the creator in shielding it from rupture that might be caused by the feats the horse is sometimes required to perform.

Cure.—Here is a composition I have used for this complaint with the best success. Take equal parts of gun, myrrh, mace, cinnamon, cloves, ginger and saffron—half an ounce of each, and two ounces of socotrine aloes; pulverize these and mix altogether. This will make a pint or over, in all; give the horse for a dose, two large tablespoonsfull, mix with water and sweeten with molasses, which will be most likely to give relief in fifteen minutes; if it does not, however, within one hour, you may repeat the dose. This is an excellent medicine for any disease of the stomach and bowels where a purgative is needed, and should always be kept on hand.

SPASMODIC COLIC.

This differs somewhat from the former, in being an affection of the muscular coating of the intestines or bowels, characterized by acute pain, with occasional intermissions, with spasmodic contractions of the tissue of the bowels, and of the sphincters of the bladder and rectum. The predisposing cause of this kind of colic, as well as in dry or red colic, as it is called, may be the impairment of the digestive organs, caused by an improper or irregular diet, such as eating greedily of new grain, Indian corn, &c.; but the exciting cause is generally the drinking largely of cold water, when heated, or exposure to wet or cold; or anything that will depress the vital energy of the intestines, either directly or by sympathy.

Symptoms.—Violent attacks and great agony; at the intervals of ease he stands up and eats his food; the pulse not much altered at the onset; the extremities not necessarily cold as in inflammation of the bowels. This disease is either to be combated by giving stimulants to restore or excite the natural action of the stomach and bowels, or to allay the spasms by anodynes or anti-spasmodics.

Cure.—Take one ounce of spirits of turpentine—beat two or three yolks of hen's eggs with it, then add half an ounce of peppermint essence and a spoonfull of cayenne; give it to the horse in a pint of water. If the spasms return, wait a reasonable time; and if they continue, give a dose of the following—say two ounces of each: tincture of opium (paregoric) and spirits of

camphor, in a pint of water. If this has to be repeated, add one ounce of sulphuric ether. Bleeding may be necessary to prevent inflammation, when the state of the pulse will warrant it.

THE RED COLIC (ENTERITIS).

The characteristics of this disease are similar to that of derangement of the stomach and bowels, in its more advanced stages. Its appearance is manifested by a more gradual approach, and lingering disease, than that of spasmodic colic, which may be present after this has disappeared; the horse may be drooping for several days, and much inclined to lie down, refusing his food, only at intervals, looking towards his flanks as expressive of the seat of pain, &c. These symptoms are much the same as when he is laboring under the effects of a slow poison. It is very difficult sometimes to distinguish between this colic and inflammation of the bowels; the pulse must be resorted to for this purpose. This, like the former, is often accompanied with contractions of the sphincters of the bladder and rectum; and in either case diuretics should not be given, as they will prove injurious. At times during the paroxysms, as in the above, a few drops only of urine may be voided, showing the spasmodic action of the bladder; generally staling may be considered a favorable symptom, for it shows the urinary organs to be relaxed. Scouring is often a forerunner of this disease, though the reverse of this is sometimes the case.

Cure.—Treat in the first place as in spasmodic colic, and if he should scour afterwards, you may give him a

dose of the tincture of opium and ether, or a quart of the hemlock bark decoction.

If the horse is very costive, warm and oily clysters will be useful, and in some cases back raking may be necessary to remove the indurated fœces, by the insertion of a small hand. Gently moving the animal about, and friction of the belly often helps the operation of medicine, and relieves him from pain. But in cases of inflammation of the bowels or lungs, exercise causes pain and distress. And then again there is this difference between colic and inflammation: with the colic the strength of the animal is not much lessened, while with inflammation he grows gradually weaker and weaker. In all bowel complaints, of whatever description, sage tea is an excellent drink.

DIARRHŒA, DYSENTERY, OR SCOURING.

The cause of the above diseases are also various; it proceeds sometimes from foul feeding, hard exercise, sudden heat or cold, causing an overflow of bile, indigestion, and weakness of the intestines. The symptoms I need not speak of further than this: when fairly set in, these diseases weaken, run him down, and finally wear him out, sooner than almost any other disease that takes hold of the horse. And yet some will tell you that this must not be checked too sudden, or stopped immediately, while others will bleed, and as often give physic as any thing else, whereby many a horse has been lost. It is true that this disease comes very near where they live, and should be treated with great care and caution. We

should not hazard the welfare of the organs that are immediately interested in this disease, nor those that sympathise with them, by giving an over dose, or too powerful an astringent to commence with, not until we have paved the way for it, which might cause inflammation, or even mortification to set in, that would be as certain to produce death as the disease that we were contending with. But we should stop the progress of this disease by first restoring the organs affected, and keep on with a steady and persevering course of medicine until the object is accomplished.

Cure.—In common diarrhœa, or gentle purging, drench the horse several times in course of the day with tea made by steeping the leaves of the red raspberry, strawberry and sage, about equal parts; this cleanses the stomach and bowels of the canker that is in them. Then give a dose of laudanum, peppermint essence and spirits of camphor, about one ounce of each—this will regulate the stomach and correct the bile, which will help to check the scouring, and is good for fever or inflammation. This medicine may be repeated once in five or six hours, or followed by giving a quart of the decoction of the inner bark of hemlock.

In dysentery we sometimes see the canker, mixed with blood, come along with the excrement, which is the scourings of the inner coatings of the intestines. If this is not stopped immediately, I think it would be easy to judge of the consequences. After cleansing the bowels of this canker, by drenching the horse with the cheap and reliable drench, given in recipes, or by giving

a dose of rennet, prepared in the manner as for making cheese, followed with a dose of brandy, to which is added a little camphor.

CHAPTER XVIII.

“He that by the plough would thrive,
Himself must either hold or drive;
And there are those that must do both,
Or be insensible to want and sloth.”

DISEASES OF THE SKIN, &c.

Mange is a species of this kind; as also surfeit and hide bound; and water farcy or dropsy has heretofore been considered a disease of the skin, and may be properly mentioned in connection with the same here. “The skin answers a double purpose of protection and strength. Where it is necessary that the parts should be bound and knit together, it adheres so tightly that it can scarcely be raised. Thus the bones of the knees, and pasterns, and the tendons of the legs, on which so much stress is thrown, are securely tied down and kept in their places. It is also very elastic, and readily adapts itself to the slow growth or decrease of the body, and appears to fit equally well, whether the horse is in the fullest condition possible, or reduced to a skeleton.” The skin is full of minute glands that are called pores, through which it is supplied with an oily fluid, by means of the insensible perspiration that takes place in the body, that render it soft and pliable. Thus it is when the horse is

in good thriving condition that the skin is loose from the texture beneath, and he is said to be healthy. The reverse of which is hide-bound, and the horse is said to be ill-conditioned. Now, these pores, constituting as they do one of the principal outlets of the body, become affected with almost every disease of the internal organs, as well as by the quantity and quality of the food he eats.

The cause of hide-bound may be the forerunner of some other disease; it may proceed from teething or moulting, of which I shall speak hereafter. But the most common cause of this complaint, is for want of a good supply of nutritious food; and if this be the cause, alteratives will be beneficial and a change of diet indispensable.

Surfeit and mange go hand in hand; surfeit is mange in the first stage; and mange is surfeit in a more advanced stage of the disease, although they have generally been considered as two distinct diseases.

Causes.—Teething sometimes produces itching and eruptions of the skin, as well as purging. In either case the mouth and teeth should be examined, allowing the horse to be of the age to have suspicion rest on this cause. Fevers also leave a scurf on the skin often causing surfeit.

Moulting.—The horse sheds his hair twice a year, viz: spring and autumn. This is called moulting, by which the skin undergoes a material change, both in the falling off of the old hair and the sudden growth of the new. At these periods of changing the coat, the skin is more tender and irritable than at other times of

the year, and the animal requires better keeping in order to perform his usual work, and supply the growth of new hair. And then it is that he is generally most neglected; he will be seen to sweat and be easily overdone if worked. Clipping the superfluous hair at this time, has been thought by some to be beneficial. But these things are very little heeded by the farmer, who wishes to have his horses live by grazing as late in autumn as possible, in order to save fodder; and he allows them to run out late in cold and pinching weather. This, undoubtedly, is the most fruitful cause of mange, and, when once established in the field, is carried from thence to the stable; there they are crowded together, often rubbing and biting each other; and if the same card and brush is used on one that is affected with mange and then on one that is not, he will be most likely to become infected with it. For after the hair begins to slip off from the pimples, a sort of matter oozes from them; and then, and not till then, is this disease contagious; but whenever this matter comes in contact with the skin of the horse that is in health, it will produce a like disease. I think it quite probable, that where it happens to fall on the delicate membrane covering the inside of the nostrils, as it may from their aptitude to be nibbling and biting each other, that it may sometimes be the first steps towards laying the foundation of that terrible and so often fatal disease, *real farcy and glanders*.

Symptoms of mange are as follows: the coat is rough, then follows a breaking out, commencing about the neck and back of the animal, and finally spreading nearly over the body, appearing like blotches or little round pimples

that rise up on the skin, and quite pointed, from which a liquid substance oozes that destroys the hair on these places, when it falls off, causing more or less itching or rubbing. Surfeit is characterized by a dirty skin; the hair appears as though it had been filled with a fine powder, and from that up to the size of wheat bran.

Cure.—Good stable management is very important wherever this disease has set in. Alteratives in this disease are very essential, for which I would use sulphur, black antimony, and occasionally adding a little asafœtida, as it has a more direct influence in opening the pores of the skin than most anything else. I would use it in small quantities, as by giving enough to physic the horse it opens the pores too much, whereby they are more liable to take cold. By anointing the pimples with the following, you will soon effect a cure: Take one pound of fresh lard, four ounces of sulphur, and one ounce of red precipitate; melt and mix these, and apply with the finger, rubbing it well in. I have another remedy for this disease that is simple and purely vegetable, and works like a charm, which is, to feed the colt that is affected, with two or three quarts a day of buckwheat for a week; during this time take four quarts of the same and turn upon it a pailfull of warm water, letting it stand three days, and stir before using, then wash the parts affected with this liquor. I know that some people have said, that they would not feed buckwheat on any account, as it produced itch, but this was before they knew its cooling and medicinal properties. By feeding buckwheat, the coat will assume a very sleek and glossy appearance, just what we want to see after any kind of

disease of the skin or any other part. It brings the humorous matter of the body to the surface, and cleanses the system. Then by applying this wash, which is equally cooling and soothing to the surface, all itching and eruptions of the skin are got rid of at once. Some may have formed an unfavorable opinion of this grain by feeding too much or too long of it; at any rate, it is good for a change of diet, which the horse so much requires; and is valuable as a medicine in all diseases of the skin, acting as a preventive against other diseases. The straw of this grain also forms an important part of the food of the horse, especially when fed on much of the heavier kinds of grain, or when diseased.

Dropsy.—Has been called by some water farcy, but it may be more properly called dropsy. -

Causes.—Over riding or driving, excessive fatigue, damp stables, and taking cold, whereby the pores of the skin become closed, so that the fluid which should have passed off through them in the form of sweat or evaporation, is collected beneath the skin.

Symptoms.—The horse is very stiff and sore, and scarcely able to be moved out of the stable, not much inclined to eat or lie down, the arms, breast and belly swollen, and hanging down like sacks, appearing to be filled with wind or water, or a sort of jelly under the skin, the dimensions of which will correspond with the severity of the case.

Cure.—Clothe warm, rub the legs often; give cayenne pepper tea two or three times a day, and every morning add a little rosin to his food for two or three days, frequently bathing the swollen parts with cold water. After

the swelling has disappeared, if there should be any sores or blotches on the skin, as there will sometimes be in obstinate cases, use the following twice a day until well: Take four ounces of fresh butter or lard, half an ounce each of camphor and castile soap, and a piece of lard the size of a hickory nut, melt and mix these all together, then add one ounce of origanum oil, half an ounce of spirits of turpentine, and when thoroughly mixed it is fit for use.

It may be deemed expedient to fleam the swollen parts in order to let out the water collected under the skin, so as to effect a more speedy cure in some cases; if so, care should be taken to avoid all veins and arteries, and use only a short fleam for this purpose that will only reach through the skin; although it will seldom, if ever, be necessary to resort to the fleam at all in diseases of this nature, when we consider that the above remedies work it out through the pores of the skin and by the urine, which is the proper mode of effecting a cure.

CHAPTER XIX.

BLOOD SPAVINS.

I am well aware of the declaration made by some in relation to this difficulty, that a horse once spavined is ruined, for a spavin is incurable. As I said at the start, it is not for one man to know all; he may understand some branches of art better than others, and he should not be blamed for not understanding them all; but I

can not consent that the spavin is incurable, and for this reason: I have cured a great many of them, some of which I have known to remain sound through life, while the animal had always been kept at hard work.

The blood spavin is called by different names by different persons, as thorough-pin, flesh and bog spavin, wind puffs, &c., but they are in fact one and the same disease, which may only be called so from the different stages it appears in after it has commenced, and may be known by the enlargement of the tarsus or hock, which is composed of six bones.

Symptoms.—It may first be seen on the inside of the joint where the skin will only be a very little raised immediately over the large blood vessel, partially hiding it at this place; sometimes it will appear on the outside of the joint like a little puff which gives it the name of thorough-pin, and then again it will sometimes spread nearly around the whole joint, which will appear in some cases twice as large as in health, when it is called flesh or bog spavin; but, generally speaking, the enlargement is confined to the inside of the joint and is called blood spavin. Between the tendons of the hock there is a little bladder or sack, containing an oily substance, which enables the tendons to slide over without friction. By some strain, either in the effort to get up in the stable and slipping, or other accident, and hard drawing, this little sack, or some little blood vessels of the parts, becomes ruptured, and the matter they contain oozes out by the motion of the joint, collecting under the skin, which makes the enlargement called spavin.

Sometimes the horse is quite lame, and at others only

partially so, unless exercised hard, and he will show it most after standing still some time, and recover soon from his lameness by being warmed up by exercise, which is a characteristic of all kinds of spavins. Young and spirited horses are more liable to injuries of this kind than others, for their legs and joints are not so firmly knit and strong, and they are more likely to overdo and strain themselves when put to work.

Cure.—When the enlargement first appears, or has not run over six months, it may be permanently cured by attending carefully to the following directions: Take a sharp-pointed knife or fleam and puncture the skin in several places over the enlargement, barely through the skin; rub the place once only with spirits of turpentine, to create a little irritation of the parts; then take a piece of strong cloth, the size of the enlarged part, and cover it well with any kind of adhesive salve that will draw pretty hard, but not so as to blister or start the hair; heat this and stick it on, then warm some more of this salve (or a little tar will answer for this purpose), and cover the outside of the plaster with it; then put on a compress and bandage as tight as you can without pain- ing the horse, which can be done by laying on this plaster a wad of tow or cotton, so that the tar will keep to its place until it is secured by the bandage, which should be about three inches in width, and wound alternately above and below the joint on the back part of the leg, and so as to cross it every time you wind it around the leg over the tow. In this way you will be able to press the bunch (that you want to get rid of) well back to the joint, or to its natural position. This is a very difficult

place to keep a bandage on, owing to the taper of the leg at this place and the motion of the joint; and this is the only way you can do it effectually. Remove the bandage and plaster every day, and wash the parts with strong camphorette spirits or oil of wormwood, well rubbed in with the hand. Repeat the compressing and bandaging until the bunch is gone, which may be three or four days, and continue to wash the parts with alcohol and camphor some time afterwards, which will strengthen the joint and prevent its return. I would advise rest, as well as caution not to strain the horse, or draw him hard for a while. I never met with a single failure in this way, and always effected a cure without leaving a scar or blemish.

In cases of old spavins, where they have become caloused or tumorous, a different mode of treatment will be required. If they contain any matter, let it out with a knife, and apply a strong blister, which may need to be repeated; then use the compress and bandage as before, and bathe the parts with the following: Take one pint of good brandy, add a handfull of bark taken from the sumach root; let this soak over night or longer, then adding, and shaking the bottle well before using, two spoonsfull of the oil of angle worms.* By rubbing the enlarged part with this once a day, and using the bandage, you will be most likely to succeed in getting rid of that which

* To obtain the oil of angle worms, take a quart bottle and fill it with worms; hang it up in some warm place in the sun until the worms are decayed, and there will be an oil left on the top which you can turn off and keep for use. It is an excellent and powerful application for old spavins and stiff joints.

is such an eye-sore to man. Although, should there be any stiffness or enlargement left of the joint after applying the above a short time, let it rest a few days after oiling it, to start the hair; and then if it is larger than you wish to have it, use the oil of wormwood on it for a few days longer. Or if there is not much enlargement, and the joint appears to be stiff, use the frog's oil which will be found in recipe No. 92.

BONE SPAVIN.

This, as well as the blood spavin, according to horseology, has had several different names given to it by different individuals. One calls it a beetle, the next a jack, another a dry knot, and so on; but the most common and proper name is bone spavin, as it becomes a bony substance, having proceeded from one cause, viz: a blow, slip or strain, whereby the lower joint of the hock is injured, the ligament covering the joint being cracked on the inside of the leg, causing a leakage from the joint itself. This joint lee oozes out and finally becomes ossified, or bony like. As it increases in size under the skin, it hinders the free play of the joint, which grows weaker as the bunch increases. The horse is stiff in that leg, and sometimes quite lame, but it comes on him so gradually that oftentimes he starts off very lame for a short distance before any enlargement of the joint is to be seen, unless it be by a very close observer. At this time it is not so difficult to cure as it is after it has formed a bunch, for then you have a double task to perform; you have not only the joint to cure so that the horse will not be lame, but you have this bunch to take off so that there

will not be any blemish; but the main object is to stop the leakage of the joint.

Cure.—Take a half bushel of dried beech leaves, which you can find in the woods any time; boil them in water for half an hour, put them in a bag and bind it on the leg, leaving a hole in the bag where it comes over the joint. Keep this hot as the horse can bear it by taking it off and dipping it in the same liquor they were boiled in, every half hour for some four or five hours. After this has been done, wash the joint with a strong decoction of white oak bark and alum twice a day for a few days, after which you may use the alcohol and camphor. Being careful to not turn him short on his legs, or wrench the joint anew for some two or three weeks, it will become sound again. But where there is a large bunch formed over the joint, you can not stop the leakage till this is out of the way. The reason why so many have failed in curing this disease is, because they have been unsuccessful in this part of the operation. Some have succeeded in the early stages of this ossified substance, by powerful blistering or firing, which is attended with some risk, and being also very painful to the horse. There have been various experiments made, and different conclusions arrived at, in attempting to dissolve this ossified substance without injuring the horse. However there are but two modes of doing it that I am acquainted with, which I feel willing to recommend to the public. The first is to shave off the hair and lay on a little liquid or sweating blister ointment (for which a recipe will be found in another place), until you get the skin nearly off from the spot, or it is raw; then apply by sprinkling it

on, or by putting it on a tallowed rag in the centre, fastening it on the sore by means of a little sticking salve around the edges. This makes a deeper sore than you can get with a blister. Wash the sore every day, and repeat this last operation until you think it has sufficiently done its work in causing this bony substance to slough off; then remove and cleanse it, and begin the healing process. The second is to take a strong ley made from the swamp ash; boil it down till quite thick, and apply as above directed to the sore. This will do its work quietly and without giving pain. But if you wish to hasten the decrease of this bunch a little faster, add to the above a very little corrosive sublimate. After cleansing and getting rid of this ossification, great care should be bestowed in order to stop the leakage of the joint, and heal up the wound without leaving a blemish, which can be done in the following manner: In the first place, take one pint of alcohol, adding an ounce of tonic acid, and wash the sore about the joint with it once a day. Then dress it every day after washing with the following salve, and apply it to the wound every day until it is healed up. It is the one to be used in taking off any bunches of this kind, either spavins, ring-bones, or any others where the joints are affected, for it has a powerful effect in stopping the leakage from the joint, and healing up the wound at the same time. Take one ounce each of honey and pine turpentine, one pint of a strong decoction of white oak bark, and simmer them together to the consistency of a salve.

RINGBONE.

This is not much unlike the bone spavin in its first stages, in many respects, only in its location. It first appears on the side of the pasterns, and, as it increases in growth, it extends forward and quite around the pasterns, or until it meets its brother on the other side, forming a ring of bony or ossified substance, from which it takes its name. The pastern joint is not only injured, but in time this ossified substance becomes so firm, that it binds the cords and ligaments so tight that the coffin and naviculare bones are affected thereby, rendering the horse very lame, &c. This disease makes its appearance most frequently on colts, or young horses; but older ones are not always exempt. It is sometimes the result of bad shoeing, by paring the heel too much and the toe too little, thus throwing the weight of the horse back of the centre of the foot, which is very straining to the pasterns. Colts having long and yielding pasterns, are more liable to have ringbones than those having shorter ones, and stand upright. Where colts are confined closely the first and second winter, much can be done to prevent ringbone by paring the horny part of the toe off occasionally, but when they are allowed to run and have sufficient exercise, they wear them off themselves. When there is any enlargement or swelling of the legs of young colts, it may well be regarded as suspicious of ringbone, for it generally results in that, and is oftener caused by need of exercise than in any other way (which is the fault of the owner), for this causes inflammation and swelled legs, which always precede ringbone.

Exercise is as essentially necessary to the growth and strength of the limbs as food is to the body. So he that does not know how to cure ringbone, can do much to prevent it.

Cure.—Take the swelling and inflammation out of the legs by bathing them in cold water, and applying the wormwood steeped in vinegar, as before stated. If the pasterns remain enlarged or swollen, cut off a strip of bacon rind, two inches wide, nearly an inch thick, and long enough to reach around the part, and tie it on by means of a strong string attached to each end thereof. I would not do anything more for it under three months, only to let him wear this, and give him plenty of exercise; for nature will do a great deal towards perfecting a cure; and harsh remedies are often attended with worse consequences than the disease. After this operation, I should proceed to take them off precisely as I would a bone spavin, being particular to oil the wound occasionally, as well as all around the coronet, to assist in restoring the hair, and also to prevent injuring the hoof.

FOR STOPPING JOINT LEE, &C.

Where any fresh wound is near the joint, or the joint is in any way injured so as to cause the joint water to leak out, as is the case sometimes by kicks, &c., it must be stopped immediately, and that before any attempt is made to heal up the wound, or the joint is spoiled, which can be done effectually in the following manner: Take, for instance, from a peck to half a bushel of old, dry beach leaves, boil them for sometime in water, then

place them in a bag having one side of it open, and place this over the joint, keeping it as hot as the animal can bear it by often dipping it in the water they were boiled in, until the object is effected, which may take some three or four hours in some cases. Then begin to heal it up by the following salve: Take one pint of the strongest decoction of the white oak bark, and two ounces each of honey and yellow pine turpentine, and simmer them together. Or if it is away from the joint, and on or near the bone, use the following instead: Take a decoction of these roots, viz: spikenard, comfrey, and bitter sweet, to one quart of this liquor, and one pound of lard, a very little salt and camphor, then simmer the whole together, stirring it well, and, when cool, it will be fit for use.

There are a great many remedies given for these complaints, many of which cure them, for the time being, about as well as scratching cures the itch; but the great object is to remove the cause entirely and effect a perfect cure, for which the above will be found invaluable.

A CURB, OR CORB.

This is a swelling that arises from the joint, or ligaments on the back part of the leg, just below the point of the hock, and is generally accompanied with considerable inflammation of that particular part. It is commonly caused by a blow or strain. The colt does this often in some of his kicking pranks, which renders the leg, when curbed, very unpleasant to the eye, and sometimes makes him quite lame.

Cure.—Muffle the leg and bathe it with cold water.

Then apply the clay and vinegar poultice; one day will be sufficient for this. After which, rub the curb with the following liniment twice a day: Take one ounce each of oils of wormwood and origanum, and one ounce of gum camphor; put them in a bottle and add half a pint of good alchocol; shake well and apply as above stated for a week. Then let it alone for a week, being careful not to strain it anew. And if the curb is not considerably diminished in that time, then fleam the parts in several places just through the skin, and bandage, removing it every day, and wash the joint with any powerful astringent; when done, rub the curb with clear oil of wormwood, and bandage again until cured.

LAMENESS IN THE STIFLE.

The stifle joint is a very tender and sensitive place on the horse; it is even next to the eye in this respect. It is constructed so that it turns or rolls almost out of its place (as it were), every time the horse steps, and is prevented from doing so only by the strong muscles and ligaments of the leg that support it, and the small sinews that are situated near the centre thereof. Consequently, when a horse is said to be stifled, it is nothing more or less than these muscles being strained by some sudden wrench, causing inflammation of the parts, and weakness, whereby the ligaments become relaxed so that they do not keep the joint in its proper place. It may be caused by a blow, strain or kick, or by the horse stepping on a rolling stone, &c. Heat, inflammation, tenderness, short stepping, or rather curtsyng, and dragging the limb along, will point out the place of this difficulty.

Therefore, to cure this lameness only requires to contract and strengthen the muscles, for which astringents become necessary.

Cure.—In the first place entire rest is necessary, bathing the parts well with cold water; then wash the joint with either the decoction of the oak bark and alum, or the tonic acid cut with alcohol, every morning; and every evening bathe it with the following: Take the whites of four or five hens' eggs, and a teacupfull of lard and rye flour, about half and half, beat them into a paste, and rub it on with the hand. Then warm it in with a hot stone or brick, applying it over and about the stifle joint. This will make sufficient for several dressings, and probably enough to cure the lameness, which will not last longer than two or three days at most.

CHAPTER XX.

TREATMENT OF WOUNDS.

Clean all wounds well if possible without washing, but if found necessary, do it with cold water. Restore the injured parts as near as possible to their original situation, and retain them there by means of stitches and bandages. Or if not expedient to do this, shave off the hair, when sticking plasters with or without bandaging may be employed. When stitches are employed, take them deep enough not to have them tear out, and about one inch apart when the wound is of considerable size, and every time there is a stitch taken, tie the thread and cut it off.

When you do not see a wound until the skin is dried and curled up, then pare the dried skin and flesh off, so as to leave the surface as smooth as you can, otherwise it will leave a scar or blemish when healed up. Subdue the inflammation of the parts by cooling lotions, poultices or fomentations, as the case may require. If the wound is sufficient to cause general inflammation, subdue it by low diet, bleeding and purging. Leave it now to nature until matter appears, or apply the salve of which there is a formula given under the head of *Joint Lee*. If at any time proud flesh appears, or the wound looks dead and blackish, touch it occasionally with tincture of aloes or gum myrrh, and syringe it with rum in which loaf sugar and blue vitrol have been dissolved. This will cleanse the wound and assist in healing it. When a wound looks red, and this bad flesh rises up, the scrapings of an old powder horn may be laid on it a short time to advantage, after which syringe with the above. In hot weather, when the animal runs out in the field, and sometimes if confined, wounds often get fly-blown and full of maggots. They should be covered with spirits of turpentine and the juice of the poison elder leaves and bark. After a wound is nearly or quite healed, it should be dressed with sweet oil to assist in restoring the hair.

Where a vein or artery is severed in a wound, and it is difficult to take it up on account of its location, or for the want of skill to perform the operation, the following articles will be found useful for the purpose of stopping the blood: Alum, wheat flour, salt, the scrapings from the inside of sole leather, and puff balls, by

applying them to the parts; and the oil of fire weed also is good for this purpose; and even when the wound is where you can not get at it in any other way, you may take this oil, cut it with alcohol, and burn it underneath, so that the smoke thereof will reach the vein or artery. It has a powerful effect in stopping the blood. Horses are sometimes taken bleeding profusely at the nose, in consequence of a fall, a blow, or carrying too heavy a load on their backs, which may be remedied by blowing flour or salt up the nostrils. Sometimes tying the head up as high as you can, for a short time, will have the desired effect.

It should be remembered that we can give only the general outlines for the treatment of this class of wounds. They must be seen to enable us to judge accurately of their treatment in all cases, as the manner in which they are made and their location are so various. For we can not speak of them with the same freedom that we could after seeing them, or those that we are under the necessity of making.

STRANGLES, OR HORSE DISTEMPER.

This is caused by a neglected cold, or by some constitutional liability. It is a disease of the glands and throat, which become swollen, hot and inflamed, reaching also the muscles of the tongue, when the whole becomes swollen and very sore.

Symptoms.—The countenance dull, eyes and nose run, glands swollen behind the jaw; he refuses his food in consequence of its hurting him to swallow; constant

thirst without being able to drink unless it is held up to him, and altogether producing more or less cough.

Cure.—Bleed copiously from the neck vein; give sulphur and asafœtida in small quantities in bran mash, if possible to make him eat it. Give the following drench twice or three times a day; take half a pint of vinegar, a tablespoonfull each of fine salt and cayenne pepper. Sage tea, with a little alum dissolved in it, is also a very good wash for the mouth; you may also steam and foment the throat, by an outer application of bitter herbs steeped in vinegar, and applied hot as the horse can bear it.

This is a very troublesome disease to the horse, but not dangerous unless the swelling continues until he dies by suffocation before it breaks. But it is very important to attend to this disease in the early stages thereof, to prevent its breaking on the inside of the throat (which often causes thick wind); to prevent which it sometimes becomes necessary to lance it on the outside. And it is sometimes the case in this disease, that the throat is so closed by the swelling, that it is impossible for the animal to swallow food enough to support nature until the swelling abates. It may become necessary (as in lock jaw) to resort to clysters, which may be made by thickening warm water with oat meal, then let it boil a few minutes only, and when cool make a little sweet with sale molasses. This makes a very nutritious gruel for the above use, and will be very beneficial if you can turn a very little of it down the natural way. It will answer in this as well as in many other diseases.

SPRUNG KNEES AND STRING HALT.

The first of these is caused by straining, hard driving down hill, &c., leaving weak joints, and causing contraction of the fore arm that draws up the cords and renders them useless to the support of the joint. Now it is useless to think of doctoring the cords for this complaint, for this reason: it is impossible to relax a cord, but by relaxing the muscles, it will drop the cord and relieve the limb.

String Halt is caused by overdoing, exposure to wet and cold, or long standing without exercise. It is a contraction of the muscles, the same as the former, only it is confined to the hind legs. It consists of an involuntary use or false action of a muscle, which overacts, jerking one of the legs almost up to the belly, and sometimes both in their turn, instead of moving gracefully and natural. Although this seldom injures the horse to any great extent for service, it is very unpleasant to the eye; and being of the same nature as the former, they both require the same mode of treatment. A horse troubled with string halt is not so bad in warm weather as he is in cold, for then the muscles are more relaxed. Anything that will relax these muscles will give momentary relief, if it does no more. I have seen an evident improvement for the time being made by merely bathing the limbs in hot water.

Cure.—Bathe the limbs from the knees or gambrels up to the body well with a strong decoction of tobacco, every day (until relief is found), and an hour or two after rub on with the hand over these muscles either of the following oils, with a very little spirits of turpentine

added to them, being classed as to their virtues in relaxing these muscles as they are set down, the last the best, viz: the oil of cedar, skunk's oil, bear's oil, turtle's oil, frog's oil.

While using the above for sprung knees you should also wash the joints with some astringent; a decoction of the white oak and sweet apple tree bark is good for this purpose. In recent injuries of this kind, a permanent cure may be expected.

To make a Star or Blaze.—If you should happen to have a pair of horses that are well matched, except that one has a star or blaze in the face and the other not, it would be very desirable, as well as important, to have them look just alike in this respect, which can be accomplished in the following manner: Take a razor and shave off the hair close about the form and size you want to make white; then rub it over once, or twice may be necessary, with oil of vitriol; after this the place will become a little sore and inflamed, when the incrustation should be removed, and the spot healed by washing the sore with copperas water. When nearly healed up, rub it over once with sweet oil, and the hair will grow out white as you desire it.

There is still another method by which the same object may be accomplished, and by some may be preferred to the above. Spread a plaster of hot pitch, the size and shape you wish the star to be made, and lay it on the place, letting it remain two or three days, or until it brings the hair off with it, and leaves the spot a little sore and tender. If this is not sufficiently deep and sore enough, you can rub on a little vitriol. Then take a

quantity of the weed called smart, a very little water, bruise the weed so as to obtain its juice, and use this as a wash until the face gets well. The hair will grow out white, and you will feel perfectly satisfied for the trouble it has cost you.

To spot a White or Bay Horse with Black Spots.—The curious sometimes take nitrate of silver, about forty or fifty grains to the ounce of rain water, and paint the places they wish to make black, which immediately turns the color on one or two applications. The speckled appearance that some of the circus horses make in the ring, has been the result of the following, viz: Take three ounces of litharge, and six ounces quick lime; beat fine, mix them together, and boil in two quarts of sharp ley in a kettle, and you will have a fatty substance that will swim on the surface. With this you can paint the places you design to have black, and it will turn to that color immediately. The marvelous can have their wishes gratified if they wish to make black spots on a bay horse, by taking equal parts of lime and litharge, and boiling them in fresh water only, and what rises on the surface will be ready for use. What hairs you touch with this in the evening will be black the next morning.

A TRIBUTE TO THE HORSE.

No. 1. They should always have what they choose to lick of clay and salt.

No. 2. Give a spoonfull once a week of equal parts of alum, ginger and red pepper pulverized, to be given in their food.

No. 3. Or for old staggers, take one pound of each,

saltpetre, alum and sulphur; pulverize and mix them together and feed a tablespoonfull once a week.

No. 4. Give a spoonfull twice a week of pure ground mustard, and if the horse is habitually costive, add, once a week, a spoonfull of sulphur.

A change of food occasionally is beneficial to the horse, but it should be so regulated as not to feed at one time very light and loosening food, and at another time heavy kinds of grain. For instance: not to feed for any length of time all roots, apples, &c., and then break off from the roots, and feed nothing but grain. A mixed diet is preferable. The grain you feed with roots you get the full benefit of, for the peptic acid contained in the roots causes a thorough digestion of the grain. Judicious feeding and driving will do much towards preventing diseases. "And it is cheaper to pay the butcher than the doctor." When you feed clear corn, new or old, give it to them on the ear, or boil it if you choose. If you have it ground, make it into pudding by scalding it, but do not feed dry meal, for it is too often destructive. And verily I say unto you not to feed cob meal at all, for this is too clogging and hard of digestion, and contains too much alkali for the horse; it often bakes in the maw and kills them.

Swelled Legs.—Some horses are troubled with swollen legs, caused by long standing in the stable without exercise, or when first brought in from grazing in the fall of the year. When this is the case, give sulphur in small quantities daily for a week; give also, twice in the week, some powdered sassafras bark. In the mean time rub the leg once a day for a week with the following:

Take two ounces of spirits of hartshorn, eight ounces of olive oil, one ounce of gum camphor, and half a pint of good alcohol; mix these together and it is fit for use. In some obstinate cases of this kind, it may be best to muffle the limb, and sweat it by pouring on cold water. And if the horse is in high condition, bleed, regulating the quantity of blood taken according to the severity of the case. But if the difficulty arises from debility or starvation, then never bleed.

Good Stable Management.—"Consists in keeping the stalls clean, removing every day all the litter or bedding that becomes wet with urine, for decomposition very soon commences after this is saturated with urine and excrement, which sends forth a vapor like hartshorn and gas," that is very injurious to the eye, lungs and feet of the horse. A free use of the card and brush is indispensable, and more particularly so with the horse that does not have regular exercise; for this opens the pores of the skin and lets the insensible perspiration escape, which makes up in a great measure for the lack of exercise. A little asafœtida should be constantly kept in the manger where he eats his grain as a preventive against distempers and all infectious diseases. And where there is or has been any such disease present, the ceiling and walls should be washed with chloride of lime. Some horsemen, when they are going to have a hard drive or day's work to perform, will give their horse extra rest and food, in order to lay in a greater share of ability to accomplish it with. And in fact I have done so myself (and experience is the best of teachers); and I have been sadly disappointed in his

failing to come up to my expectation in proportion to the extra care given him. Therefore, regular feeding and exercise are very important in good stable management. When by any cause you happen to miss giving your horse his regular meal, you should give only the usual quantity at the next. In the hands of some, the horse suffers wonderfully from thirst. Water should be given him a little at a time, and often, and in that way allow him all he chooses to drink, and it will not hurt him. But never let him drink two or three pailsfull at a time, as he often will after going without all day, and more especially when he is warm and fatigued, or when he is going to be sharply exercised immediately after.

Feeding is a very important part of stable management; and I think you will agree with me in saying that good oats are the most natural and best kind of grain for steady feed, and for all kinds of business that is required of the horse; although corn, barley or wheat may, with advantage, if properly fed, be added to form a part of his food in cold weather, when he is employed at the heavier kinds of work. "Oats are best to be six months old at least, if they have been kept sweet and free from must. The old oat forms, when chewed, a smooth and uniform mass, which is easy of digestion, and yields all the nourishment it contains." The oat is said by chemists to contain seven hundred and forty-three parts out of a thousand of nutritive matter, which is much less than the other grains spoken of above, and they appear to be peculiarly adapted to the requirements of the horse; for when he has been long fed on oats he has been comparatively healthy, and not so often attacked with colic or

inflammation of any of the internal organs as when fed on other kinds of grain.

Feeding and rearing are closely connected with stable management, and have so much to do with the habits of a good horse. You will allow me to state here that buckwheat puts on fat and helps form bone of the animal as fast as any kind of grain; consequently it is good for an occasional change of diet, as well as for its medicinal properties. But oats feed the muscles and give better action and livelier feeling than any other kind of grain; and they cause the colt to run and play more, giving strength and activity to the limbs and muscles. Therefore oats, being readily digested, plainly show why they are the best kind of grain for common use. "Unless the horse is naturally disposed to scour, ground food is best." Many have supposed and practiced brining the hay and straw, thinking that their horse would eat much better and more of it. This undoubtedly is so, and may be useful some times to induce a sick horse to eat; but not unless he has been shamefully neglected before by not having what salt he wanted, when he eats it for the sake of the salt alone, and, by so doing, eats too much hay, if he does not eat too much must and other foul stuff that otherwise injures him.

Every overseer and proprietor of the stable ought to understand the nature and formation of the foot; and I might add to the above with propriety the shoe smiths. Some have frequently had the frog of the foot pared out very nicely in order to give beauty to the foot: Why? because it was the prevailing fashion. And after a few repetitions of the same, they would wonder why their

horse was lame or unsure, and they would blame the smith because their horse was lame, tender-footed, hoof-contracted, &c. Now in my estimation, what causes pain, inflammation, rotten feet, and even death itself, never adds anything to beauty. The frog is the natural brace and support of the foot, and will endure more knocking and pounding on the pavement or macadamized road without injury, than the horny part of the hoof—yes, and even the hardest shoe that was ever made. The frog is made elastic and springy for this purpose, and will stand more friction and hammering than two pieces of hardened steel of the same size. It would have been better for many a horse if the art of shoeing them had never been invented, than to have been treated as they have been in this respect. Most of the contracted hoofs, pumiced feet, and all those kindred diseases of the feet, are attributable to this abominable practice. By continually paring away the frog, it causes it to shrivel up, and in time you get an inferior one, and then the hoof contracts to it, and thus come narrow heels. The broad heel, round and tough foot that nature formed is lost. Therefore the importance of never making the frog acquainted with the knife at all, nor any edge tool whatever (except in a state of disease), can not be too often repeated to the smiths, nor to others in charge of your stables. No, not even the ragged part thereof should ever be touched with the knife, for this helps serve as a protection to the envelope or membrane beneath, which again shields the more sensitive part of the foot; and nature will take care of it without our aid, or cast it off as fast as it becomes cumbersome to her.

Disinfectants, Deodizers and Fertilizers.—By the use of disinfectants we may prevent disease, give health to our animals, and make them more useful and valuable. And the thrift of many a farmer depends upon the accumulation and application of his fertilizers, which is all the bank he need be directly interested in. Half a peck of onions, halved and run on a string, will prevent a horse from being infected with any kind of disease, if hung over him in the stall, even if one diseased stands in the next stall to him. The use of asafœtida (as before stated) and the chloride of lime, brought to a solution and applied to the ceiling and mangers where diseased animals have been fed, are undoubtedly two of the best articles employed in this way as disinfectants. But this is not all that can be done in this respect. Where horses are confined in stables, the effluvia or gases that are continually arising from filthy ones, are very injurious to their health, and are often the exciting cause of various diseases. This is witnessed in our cities most, or where there are a great many of them crowded together. Nor is this all the harm that is done by the stench that arises from large stables being filled with these useful animals. The common, or atmospheric air, becomes overcharged with these poisonous gases, and is thus drawn into the lungs of the horse, yes, and men's too, often causing violent and loathsome disease in both. There is a remedy for this, or an agent that will in a great measure prevent this evil, which is to be found in the common or muck earth, brought from the forest. One peck of either of these strewn under the horse at night, and then covered with straw to bed him in the

usual way, will entirely eradicate this evil. As often as necessary for the above purpose, it should be removed and placed on the compost heap in the yard, and the stalls replenished with new, fresh earth; and if there should be a sprinkling of either or both of powdered charcoal and plaster of paris, mixed with it as it was put in the stalls, it would be all the better, and would more than doubly pay the expense as a fertilizer. The muck earth, as well as the other articles named, absorb the juices from whence this gas arises, and thus purifies the air of the stable, and instead of being left to waste, and work its worst influence on all that breathe it, it is turned to a profitable account as a fertilizer. Forest leaves and saw dust may be used as a substitute for the above, and as forming a part of the bedding to advantage.

It is better to feed from a rack where they will have to reach up a little after their food, not only because their necks will come up better, but because reaching down is injurious to the knees, &c. And where they are to be fed from a manger, the bottom thereof should be raised as high as their knees on this account.

In the best regulated armies of the world, the hay as well as the grain, is weighed out to each horse; twenty-five pounds of hay being considered all he ought to eat in twenty-four hours, on account of his health, and having him fit for hard service. The horse should not be fed more at a time than he will eat, to have it left for him to breathe over.

CHAPTER XXI.

“The world is my country, and to do good is my religion.”

GLANDERS AND FARCY.

This is a very difficult and important part of this work, and the more so in consequence of its always being considered so fatal to the horse, and embarrassing because it has been pronounced incurable (by the learned profession) from time immemorial. Perhaps I am the first to say that it has been cured. It is as easily managed as many other diseases. Among the various remedies heretofore given there seem to be only two worthy of notice, or of much consequence to the horse or its owner, viz: The first of these is, to destroy the glandered horse immediately on suspicion being confirmed that he is such, for the safety of others around him. Now, this one certainly contains a moral that I can not object to, provided the parties interested give their consent. The second consists in trading him off as soon as you have any suspicion of his having the glanders. This I will not attempt to answer here, only by saying, as Michael Hoffman said when challenged to fight, bad.

Before I became acquainted with the nature and ravages of this disease, I used to wonder and think it strange that, among the thousand and one diseases that this noble creature was liable to, this one alone was incurable, while all the rest had so many remedies given for their cure. And I am rather inclined to think now, that this declaration, coming as often as it has from the learned (of the old school), has deterred many from an investi-

gation of this subject. For man can do almost anything if he only thinks so, and sets himself to work in earnest about it, or, to say the least, what has been done can be done again. Now, supposing you were on board of a sinking ship at sea; which would be the best course to pursue, to proceed at once to stop the leak and thus save the vessel, or all hands go to bailing and pumping until she sunk with all on board? I think you will agree with me that the first thing to be done is to find the leak and then stop it. Thus it has been with this disease of the horse; all hands have engaged in pumping until the vessel has sunk to the bottom, or they have added fuel to the flame, by administering those nostrums that increased the difficulty instead of arresting it, until the horse has rotted down with the glanders. But they have never found the leak, consequently they did not know how to go to work to stop it. Glanders in the first stages is merely a local disease, which is as easily cured then as any other. But when allowed to run on until it becomes general, the difficulty increases in proportion as the disease approximates death. There is a constant secretion of fluid from the glands to lubricate and moisten the membrane that lines the cavity of the nose, and which, in cases of colds or catarrh, is increased in quantity and altered in appearance and consistence. It is also lessened and dried in cases of fever, &c. "But what is to be considered here, is the continued and profuse discharge of thickened mucus from the nose, after every symptom of catarrh and fever have passed away," which is either continually running, or snorted out by the horse in masses, and finally leads on to glanders.

This inside lining, or membrane of the nostrils, affords the same assistance to the veterinarian as the tongue of a person does to the physician in cases of fevers, &c. Or, in a word, it is the thermometer of the lungs. When the horse is in health, this membrane assumes an even color, bearing to that of a pink flush; but in inflammation it sympathises with other parts, and partakes of a darker red. Inflammation of the lungs, however, as well as glanders, sometimes gives it purple spots. It is extremely sensitive for the purpose of smell, &c, and is indicative of the severity and character of disease. It often suffers from the poisonous vapors arising in ill-ventilated and worse cleaned stables; for such ones oftenest witness the ravages of glanders. Every exciting cause of disease exerts its chief and worst influence on the membrane of the nose. "And there are scarcely any other disease of the horse which may not lay the foundation of glanders."

Glanders is in a high degree contagious, but unless this glandery matter comes in contact with some broken skin, sore, or delicate membrane, as that of the nostrils, it is not likely to produce a similar disease. But in this way man is as liable to be infected with it as the horse, and may prove as fatal to him; consequently great care is requisite in handling a glandery horse, and this should not be lost sight of for a moment if you should ever have the curiosity to dissect one that has died with this disease, for if you should happen to cut even your finger (during the operation) with the knife that is besmeared with the blood or any of this matter, you are infected with it.

Glanders is a local disease, in the first place, and commences on the glands and membrane of the nose. It is caused by neglected colds, catarrh, and many other diseases, as well as by bad stable management and contagion, which leaves a taint on this sensitive organ, and, if not arrested in time either by art or nature, it soon reaches the salivary glands, which causes them to harden and swell. The horse may remain in this stage of the disease, comparatively, for a considerable time, without becoming materially affected in health or usefulness. "Although he may have given it to great numbers of others that have been hurried off to the shades before him," unless some other exciting cause of disease sets in with it, he may continue along indefinitely. Some have attempted to dry up this superfluous discharge at the nose, thinking that was all that was required to effect a cure, or get them in a condition to trade off to advantage. But they have been woefully disappointed. To expect a cure, this discharge must be promoted instead of trying to dry it up, and at the same time cleanse and heal this membrane and glands, and restore them to their office and original purity. "It will be borne in mind, that this discharge at the nose of the horse, answers him the same purpose that spitting does with the human species."

Symptoms that characterize this disease in the first stages thereof, are an increased discharge from the nose, and from whatever cause it may arise, it must be regarded with suspicion. But when it continues for any length of time, and is small in quantity and thin in appearance, and the glands swell, and cleave or adhere

to the jaw bone, whether the matter discharged from the nose be purulent or gluey, it matters not; no time should be lost before using the following remedies, which are worth a good horse to any one having much to do with horses, for its reliability in preventing and curing this disease.

Cure.—First, let the horse inhale the fumes or steam of saltpetre dissolved in vinegar, poured on a hot stone under his nose, for a few minutes each day, for a week. each day after this has been done, anoint the septum of the nose well up in both nostrils, with the following, by means of a piece of sponge fastened to a whalebone or splinter: Take one drachm of kreosote, one ounce of lard, and triturate them together, when it is fit for use. For a few days after this use mullein oil in the nose, as above; and if the glands are much enlarged, or cleave to either jawbone instead of hanging loose between them, as they do in health, rub them also, and the jaw about where they cleave, with frog's oil. This changes the action of the mucus membranes, and consequently changes the matter sent forth, restoring the parts to health. Reader, do not suppose that this is all there is of this disease, nor all that can be said of it here, for I have only given you the treatment to be observed in the first stages thereof. But go with me a little further and see what it may lead to. Sooner or later, according to the condition and constitution of the animal, this poisonous matter, arising from the foregoing causes, after tainting the above named organs, is taken up, and, by the activity of the absorbents, is thrown into the circulation of the blood, and then diffused over every part of the system

and carried by the blood vessels into the lungs, "where all the blood passes many times every hour, and there undergoes a change," by exposure to air, &c.; therefore, it is of permanent importance to preserve the blood in a healthy condition, because the blood is the vital fluid and principle of life; and when it is affected, the whole organization is affected also. When this poison enters the circulating fluid, then it is that this disease begins to become general, and loses the title of the local one. Diseased particles being carried into the lungs with the blood, these organs are next to suffer from this poison, whence arise little tubercles on them; after the formation of which, there may be seen very small ulcers and purple spots on the inside of the nostrils. The matter discharged from these is more varied in color and consistence—that is, more purulent at times, and gluey or streaked with red at others, which mislead as to the character of this disease.

Here is a very critical period of this disease. It is either carried now by the large blood vessels to the head, when the brain becomes the principal seat and sufferer (of which I shall speak hereafter) or it is taken along by the absorbents to the extremities. "Along the course of these absorbents are natural valves of the lining membrane thereof, which are pressed against the sides of the vessels, and permit the fluid to pass in a direction towards the chest, impeding its progress from the chest." This poisonous matter, coming in contact with these sensitive organs, excite and cause them to become inflamed and swollen, which makes them appear like corded veins that rise up and break, from which oozes

more of this poisonous matter. Before these break they have been called by farriers, farcy buds, which has given the disease the name of farcy. They are evident to the eye, and will first be observed about the lips, inside of the thighs, and along the flanks. This is by no means the most alarming stage of the disease; for even now the horse has been restored to health and usefulness by the following management, viz: attend strictly to the directions given for cure in the first stage, &c.; and if these buds have broken, syringe them with rum, containing a little blue vitriol and loaf sugar dissolved. Feed the horse from four to eight quarts of buckwheat a day for a week or more. After which he may have some tonic medicine given to strengthen and invigorate the system, but never bleed in case of glanders.

Such medicines as can not be concealed in the animal's food, is best to be given in the form of drinks, and in some cases the quantity to be given is so small that too much is absorbed before reaching the place you wish it to act upon most. Therefore if you can get any kind of food that contains the same medicinal properties, it has a better effect upon the system generally than any medicine that you can give in small quantities. Of this the buckwheat is an example in the cases it is recommended for.

When the above symptoms of this disease have been witnessed, the brain or head is left comparatively healthy except this nasal discharge. But when they are not, and the inflammation of the nasal organs or glands, has continued for a considerable time without their appearing, then it has been carried in a more direct channel

to the head through the large blood vessels, when the brain becomes affected with the poison, and then it is that the disease is more likely to prove fatal, and has led some to suppose that the disease originated in this organ. At this stage it is that the symptoms of the disease are different from what they were in the foregoing stages, in this respect. The nasal discharge is increased and of a darker color or blackish, and sometimes streaked with blood, and the whole system is more rapidly involved by it. There will be an evident tenderness about the temples and forehead, accompanied with heat, &c.; the eyes run, and all the little sinuses or cells of the face and head are filled with matter.

Cure, if there be any.—Continue the above remedies faithfully. It may be expedient to rowel the throat or jaw near the place where this gland cleaves to it. The forehead and temples should be rubbed well every day with the mullen oil. “Iodine, in the form of iodide of potash,” says Small, “is useful and scarcely ever fails to disperse enlargement of the glands, or hardened tumors, whether under or at the sides of the jaw, or round the joints.” One part of the iodide of potash must be mixed with six of lard, and the ointment well rubbed round the parts every day. This may be employed to advantage in the room of the rowels spoken of above. The same is also very useful to arrest the growth of tubercles on the lungs, and even to disperse them when recently formed. And when there is a cough attending the other symptoms of glanders, the iodide of potash may be given in doses of three grains, morning and evening, in bran mashes, at the commencement of the treatment, and gradually

increased to six grains, and continued until the cough abates and the condition of the horse has improved; or the ergot of rye may be used internally, as a substitute for the iodide of potash.

The brain of a horse that dies of glanders, is sometimes wholly changed to a sort of gangrenous matter; or near the base of the brain there will appear a sack filled with the same. Veterinarians have bored through the frontal bone of the face for the purpose of letting out the matter collected in the cells and sinuses of the head, without any injuries resulting to the horse. Shepherds have been successful in curing what they call water in the head of sheep, by running a sharpened wire up the nostrils, through the sack that contained this water on the brain, and thus let it out; and sometimes they have bored through the skull for the same purpose with equal success, penetrating the brain in both instances. The brain of a horse may be bored into, or cut, or even a part of it extracted, without destroying the life of the animal. You may cut the brain without producing any sensation of pain to the horse, notwithstanding you hurt any other part, while at the same time the brain being the seat of pain. Why, says some one, this is a very broad assertion. Very well, I know it involves the question again of this organ being the motive power, or the originator of all the motions of the limbs, &c., which might be carried much farther than my time or purpose would admit of here. But if it were not for the sensation produced by this organ on other parts, it would not produce pain to cut off a leg any more than it would to cut off a stick of wood.

Will some genius have the goodness to tell us in what way we may be able to save the life of a glandery horse after the disease has so far advanced that medicine can not save him from his untimely doom?

CHAPTER XXII.

CRITERIA OF AGE, &C.

“It is not what people profess that makes them righteous, but what they possess” and practice.

To be able to judge correctly as to the age of the horse, by those who are dealing in them, is of great importance, as the real value of a horse so often depends on this one point, because there is so much jockeying practiced in this respect. To do this with perfection would require something more than book learning; it would require the closest observation, with the experience of years, of the teeth and other parts, of such animals as you might know the age of, as well as others, from the youngest to the oldest, which is the true school in which to graduate in this particular branch of instruction. Although much may be learned from books to assist one in his observations, yet after a little experience in this way, he need not be deceived much as to the age of a horse.

The colt should be foaled with four front teeth, two upper and two lower ones, though it often happens that he is foaled without any; but in this case, these front teeth soon appear, for he can not suck well until they

do. With these also appear four double teeth, or grinders, viz: one in each jaw above and below, and have been called the first of the natural mill stones, used for the purpose of grinding down the vegetable fibre and fit it for swallowing and easy digestion. Having already his four front teeth, which are called the pinchers, at about ten days old the colt puts forth four others, one on each side of the former ones, above and below, called the separators. At about two months old, he begins to shed his first coat, which may be seen in small spots about the hocks, thighs and nose, which he generally gets entirely rid of by the time he is four months old. The time of cutting all his first teeth varies, however, according to the maturity of the colt at the time of parturition, and the fare he happens to meet with afterwards. Somewhere from six to ten months old he cuts the four corner teeth; after these are up there is not much observable difference in the front teeth (except in the wear of them) until after the colt is past two years old. "During this time, resource must be had mainly to the coat alone. A yearling colt has a rough coat, something like that of a water spaniel dog; and the hair of the mane and tail feels soft like flax, and hangs like untwisted ropes; whereas, a two-year old has a flat coat, mane and tail, like that of an old horse." At one year old, the colt has four grinders above and below, in each jaw; at two years old the fifth pair will appear to view, and at three years old, the sixth, making twenty-four grinders in all. The teeth that first appear are the first to be shed, and their places supplied with new ones. Therefore, the first grinders are changed at two years

old; at three or three and a half, the second pair will be shed. At four years old, the sixth pair of grinders will be level with the others, and the tushes will begin to push up. From four to five years old, the last important change in the colt's teeth takes place; the corner teeth are shed, and the tushes are up. The three last pair of grinders and the tushes are not shed or changed for new ones at all.

But we will now go back for the purpose of examining the colt's teeth a little further, which are always large and broad compared with those that follow them. From two to two and a half years old, they shed the four first front teeth, which are supplied with new ones, like all the rest, in regular rotation as they first appeared. From three to three and a half years old, they shed the four next, or separators; and from four to four and a half, they shed the four corner teeth, as stated above. "The horse carries forty teeth, viz, twenty-four grinders, twelve front teeth, and four tushes," which are called his horse teeth, while the mare has only thirty-six, she not generally having the four tushes except in old age.

We are now done with the colt teeth, and will proceed to say something more about those of the horse. His front teeth appear in the skeleton like several rings, placed one inside the other, forming a rough surface for the purpose of masticating food, &c., or like a nest of crucibles with their glazed and hardened edges sufficient to withstand the fire, and melt whatever metal may be placed in them. While in nature, the inside ones are hollow, as follows: There is a deep black hole in the centre of each tooth of an oblong shape, which is shortest

in the middle teeth, a little longer in the next, or separators, and longest in the corner teeth. Between the age of five and six, the four front teeth fill up in the centre, and, instead of the holes above mentioned, have only a black ring. Between the age of six and seven, the four separators fill up in a like manner. And between seven and nine, the corner teeth fill up also; but, generally speaking, the corner teeth present a level surface at eight years old. You can not depend on the wear of the teeth as much as a great many have imagined. Something may be known relative to the age of the horse by the tushes, which are sharp on the point, and have two grooves on the inside of them running from the point quite down to the gum. The tushes continue to grow in size until the horse is about eight or nine years old, after which they begin to be more blunt on the point, and smooth on the inside. At the age of ten, these grooves are scarcely discernible by the eye or finger, and at twelve they wholly disappear, when the tush becomes quite round and blunt, and is of no further use for the object in question, except in the wear of them. The front teeth are always broad and thin in a young horse, and grow thicker and narrower with age, until he is twelve years old, when they become as thick as they are broad, at which time they begin to round off and he is said to be in his teens. After he arrives at this age, the teeth wear off quite fast, and by the time he is from fifteen to twenty, the front teeth become entirely round. The gum also (in a young horse), covering the front teeth, has the form of a low arch, and as the teeth round off the gum settles down between them, making the

teeth look longer and the arch higher, until it takes the shape of a gothic roof, so that the smaller and rounder the teeth, and the more the gum approximates this shape, the greater the age of the horse must be. Now these marks of the teeth seldom, if ever, all fail in the same mouth. Though one or two may vary a few years, a majority of them will disclose the truth as to the real age, &c.

“The general indications of old age, independent of the teeth, are deepening of the hollows over the eyes, gray hairs about the forehead and nose, thinness and hanging down of the lips, sharpness of the withers, and sinking of the back, accompanied with a tetering gait.”

Much can be told by the general appearance and action of the horse relative to his age. But this is not all; there are certain marks whereby the age may be determined pretty accurately by a close observer. Until he arrives at the age of seven or eight years old, the eyelids are marked only by very fine wrinkles that number from six to eight. Every successive year after this, there is an evident deepening of one of those wrinkles that the age may be counted from, after he is eight years old, when the gray hairs will begin to appear. Although these marks are not very reliable to the casual observer, yet some may profit by them.

There is another method of knowing when a horse is past twelve years old, viz: the inside of the nostrils are red or flesh color, which comes down on a true circle generally within an inch or two of the rim or hair on the muzzle. Below the edge of this red circle, the color of the nostril is of a darker tint, varying according to the

color of the horse; and after the horse is past twelve, the edge of this circle begins to be broken up with white spots, making it look like saw teeth, or one of these white spots will sometimes appear half an inch below the circle, and about as large as a common sized pea, which increases in size with the age of the horse, or another one is added every year. These marks, also, may aid one considerably in determining the age; but to have them reliable, they must have been examined previous to their appearance. And again there are other marks whereby a man of observation may tell the age of a horse as well in the dark as by daylight, that is, by feeling of the lips, jaws, neck and tail, which are as follows: The neck of all horses under the age of four years, will feel perfectly smooth from the head to the breast, notwithstanding the condition they may be in. At the age of five years you can feel on either side of the neck, about midway from the jaw to the breast, a small bunch about the size of half a chestnut; also by passing the fingers immediately over the cervical vertebræ or bones of the neck, which are seven in number, consequently there are six joints in the neck, exclusive of where they join on to the head and back; and every five years adds another bunch over one of these joints, until there may be six counted. These bunches grow somewhat after they can be felt, and are plain to be seen with the eye in old age, which is caused by the shrinking away of the flesh between the joints. The same rule holds good also with the tail, with only this difference: the joint next to the body is the first to appear enlarged, which takes place about the time they shed the first colt teeth; and each year adds one other

enlarged or matured joint, and so on to the end of the tail, which generally numbers fifteen. These marks may vary a trifle in different horses, but, generally, they are as plainly felt as the nose on a man's face. The jaw bone of all young horses is quite as thick and round on the edge, and near the bifurcation or junction above the chin, as your finger. At about eight or nine years old, this bone begins to flatten and grow sharper on the edge, until you find it in a very old horse as sharp as the back of a knife blade. Now a careful and experienced hand in this matter can tell the age of any horse by feeling, with his eyes closed, certainly within two or three years, and some will not vary over one year in going over a dozen horses.

CHAPTER XXIII.

YELLOW WATER AND JAUNDICE.

This is a very common disease in some sections of the country; and being infectious, it is sometimes brought into our cities by horses intended for the market, &c. It is also extremely fatal in its consequences, unless some measures are taken in the commencement of the disease to impede its progress.

Symptoms.—The symptoms attending this disease are very striking; the eyes, lips and bars of the mouth assume a yellowish cast, and attending which are low spirits and loss of appetite. The excrement is hard and yellow, or of a bright color. The urine will be of a very dark color, and, after being discharged a little while,

looks like blood. One evident symptom of this disease will appear on pulling out some of the hair from the mane or tail, which will be dry and curled on the end and yellowish, instead of white as in health. The whole circulating fluid of the system appears to be affected by this disease, which proceeds from a disordered liver. To effect a cure the bile needs to be regulated, which helps to restore the blood to its former healthy condition.

Cure.—Take two drachms each of gum camphor and asafœtida, dissolve and give as a drench every morning in a pint of old cider. Make a tea by steeping the bark of the common wild black cherry tree, scalding a gallon of wheat bran with it, and give the horse every day, after adding a spoonfull of the dried and pulverized root of burdock. Be sure not to bleed. Let his exercise be regular but not hard; give him a good rubbing and stabling, and his health will soon improve.

Recipe for the Cure of Yellow Water.—Take two hen's eggs and two spoonsfull of soot, or powdered charcoal; beat them together, and give the horse every day until he is better; in bran, if he will eat it prepared in this way; if not, prepare some more and give in a drench of cherry or mint tea.

DEAFNESS.

I would as soon drive a blind horse as a deaf one, and it much oftener happens to be the case. People do not generally know or think what the difficulty is with their horse. You may know when the horse is troubled with deafness, by his not paying any regard to the word of his master, either in starting or stopping, until he sees

or feels the whip or motion of the reins. This is sometimes caused by colds, fevers, blows, &c., which cause the ear wax to collect and remain in the drum of the ear until deafness is the result.

Cure.—Turn a teaspoonfull of the extract of swamp ash bark into each ear, two mornings in succession. Then for a few days following, turn in a few drops of either skunk's or woodchuck's oil. One week is generally sufficient to cure the worst cases of deafness, unless it is the effect of old age, and then it would be useless to tamper with it.

SCALDED OR GALLED BREAST.

Now it frequently happens in the spring and autumn of the year, when farmers begin their farm work, that their horses' breasts become very sore and badly galled, as well as canal and other horses used for draft. The skin being more tender at this season of the year in consequence of the horse shedding the old hair and the sudden growth of the new. As a preventive for this difficulty, keep your harness clean and soft. Wash all the sweat and dust off from the horse's breast every noon and evening with cold water, and also every morning with a decoction of hemlock, or white ash bark, not very strong. This will not only harden the breast, but it will prevent the collar from chafing and making it sore. Refrain from putting on any kind of oil or grease while using the horse, for this will catch all the dust, and the grit thereof will surely make a sore.

Cure.—Treat as you would any other sore; or observe entire rest, and leave to nature. When you continue to

use the horse with a sore breast, apply every evening the wormwood herb steeped in chamber lye, cleaning well in the morning before laying on the harness. If allowed rest, the remedy given for burns is very quick and effectual.

TETANUS, OR LOCK JAW.

This is not unfrequently brought on by some very slight cause, as cuts, blows, or derangement of the nerves and muscles. It commences with a difficulty in mastication, and finally the jaws become immoveable; and unless it immediately precedes dissolution (as is often the case with other diseases), relief can be obtained in the following manner:

Cure.—Wash the jaws and neck well with a strong decoction of tobacco for an hour, and if it is possible to make him swallow by turning it into his mouth or between his teeth, give him near a gill of the hot drops. A free use of the frog's oil on the jaws and about the throat afterwards, will be very beneficial.

POLL EVIL.

Is caused by a blow or bruise. It may be caused sometimes by the horse pulling on the halter, and bruising the top of the head in that way which causes a swelling there, which is the first symptom of this disease. Or it may be caused by the horse throwing his head up suddenly in low stables, &c. In the onset it should be treated as any other swelling to disperse it, for which the clay and vinegar poultice may be found useful, or hot fomentations of vinegar and wormwood, after which

it may be washed with camphoretted spirits, or any of the stimulating liniments; or it can be scattered by using the yolks of hen's eggs and sugar, as given in recipes; and sometimes it is only necessary to shower the parts a few times with cold water, and then apply the liniment to effect a cure. But if allowed to run on until it breaks and forms into pipes, and discharges from thence, then a different mode of treatment will be required. Now, here comes another long kept secret, and a great mystery to some, which may be the means of doing some good in the world if made public. The poll evil, after arriving at this stage of the disease, requires precisely the same treatment to effect a cure, that the cancer does in the human species. The following remedies have saved thousands from a premature grave:

Cure.—Instead of using the knife or hot iron (as in olden times), by which many a valuable horse has been lost, apply the following remedies, which are three in number; the first is the mildest and sufficient to cure in the first stages of this disease. It is what the Indians use to cure all red spots on the face, or other parts, which, if let alone, often terminate in cancer. The first is simply to take pure tobacco (a good Spanish cigar for instance) and reduce it to ashes, then wet it up in the form of a poultice with spittle from the mouth and apply it to the sore. The second is red oak bark, reduced to ashes, then leached, and the lye boiled down to a kind of salve, and applied as above. Or it may be obtained by boiling a quantity of the bark sufficient to get the strength, and then strain and boil down. The third remedy is the most sure, as it is the most powerful;

it being what the celebrated cancer doctors of the age call the real kill devil, pretending it only grows in some obscure place on the Catskill mountains, &c., and is commonly known by the name of swamp ash. Either the black or red ash (*fraxinus pubescens*) will answer. The bark only is to be used for this purpose, and that reduced to ashes and leached, and the lye boiled down to a salve, &c., which should be applied once or twice a day until these pipes or roots are eaten entirely out. Clean off the excrescence every time before applying any more salve, with castile scap and water, using as much perfumery or as little as you choose on the surrounding parts. When this is thoroughly done, use the following salve until it is healed up smooth: Take equal parts of yellow pine turpentine and honey, with a quantity equal to both the former of a decoction of the white oak bark, and simmer these over a slow fire down to a salve.

Fistula on the Withers, differs but very little in its nature from that of poll evil, except in its location. It may be caused by being bruised with the saddle or collar; or, like sweeny, it may be caused by checking the draft horse too high (or too long at a time), which causes more friction at the point of the shoulder blades, and has a tendency to tire and weaken the muscles of the neck, and, by taking cold, it may settle at this point and produce inflammation and swelling. And the horse may be made to bruise the withers by rubbing himself or rolling, in consequence of the irritation produced on these parts by the former.

Cure.—Observe entire rest, and treat precisely as you would poll evil, and a cure will be effected in a few days.

TREATMENT OF CORDS AND MUSCLES.

I have already given directions for relaxing the muscles, in speaking of other diseases, and now I will tell you how to strengthen them after they have become weakened by blows, strains, rheumatism, or other causes, &c.; this can be done in an astonishingly short time by the use of the following — first rub it on the parts affected, and then bathe it in with a hot brick or shovel: Take equal parts of sweet apple tree and white oak bark; boil them in water sufficient to get the strength; then strain and boil down to thick syrup; when cool, add a very little alcohol, and bottle for use. When you have occasion to use any of it turn out what you want to use at once, and add to that a very little spirits of turpentine; mix thoroughly, and use as above stated. Where the parts are much swollen and inflamed, previous to using the above, it may be well to bathe the parts with cold water until the inflammation is subdued. One application of the above is frequently sufficient to relieve the animal from pain and lameness in very aggravated cases. This remedy is very useful in many complaints, as lameness in the stifle joint, weakness across the loins, tipples in the back, and all soreness or stiffness in or about the shoulders, &c. The affinity of spirits of turpentine for water is so great that it is more readily taken up by the absorbents and carried into the fluids than anything else that can be used for this purpose; therefore, when mixed with other ingredients, they are taken along with it through the pores of the skin and carried deeper and nearer the seat of pain; hence comes the benefit of this article when used as above.

CHAPTER XXIV.

SURGERY,

“Is curing by manual operations, with or without medicine.” The setting and replacing broken bones is seldom called into requisition in horse surgery, or veterinary practice, and it would be a very difficult task for me to lay down rules on this subject that would be applicable in all cases. Perhaps there would never any two cases happen just alike, consequently each would need different fixtures and the mode of treatment would vary so much that it would be useless to the reader for me to make the attempt, and especially if one had a practical knowledge of the subject under consideration, or if he had the mechanical ingenuity that is so necessary for one to have before he should venture to perform operations of this kind, it would be wholly unnecessary for me to say more to him. Though I have performed many operations that might with propriety be brought under this head, I propose to speak of only a few.

The Breach.—Accidents of this kind often happen with colts where they are allowed to run in company with horns, stakes, knots, and cruel masters. It renders them almost valueless unless they are cured, which is not a very difficult task to perform, for I have cured many without ever witnessing a single failure. A breach, or burst, is where the wall and membrane of the abdomen gets broken through by some kick, blow, or other means, lacerating or rupturing these parts to such an extent as to allow the guts to protrude through, and lay next to

the skin, making a tumor on the outside in proportion to the size of the wound within. The skin being tougher and more stretchy, seldom gets broken in this way. When you wish to remedy this difficulty, take the animal down and have him well secured with ropes, or sufficient help for this purpose. Lay him on the unaffected side, and work the guts back into the body with your finger, ascertaining at the same time the extent of the wound in the wall of the belly. Then with a sharp knife cut the skin to correspond with the breach, or a little longer than it is on the inside, being careful to not cut the guts if they should have worked out again, and if so, put them back in the body, keeping them as clean as possible. Then with a crooked needle and a strong waxed linen or silk cord (not too large for the needle), sew it up by stitching through the skin and inside both together. After you have taken one stitch on the inside to assist you in keeping the guts back, tie the thread every time you take a stitch. Cut the skin if the wound will admit of it, so as to have the incision up and down when the animal is on his feet; it will then have a better chance to discharge the matter, &c., and the stitches will not be so likely to tear out. When you let the animal up, place a strong bandage around the body, drawing it as tight as you can and have him breathe easy. Keep this on some ten days, after which there will be no danger of the stitches tearing out, for by this time it will be sufficiently healed or knit to hold without their aid. If the injury is a recent one, the edges on being brought together will readily unite, but in old wounds of this kind,

or natural breaches at the navel, the edges of the wound will be healed over as smooth as your finger, and in that case you must pare the margins off smooth so that it will be raw and bleed quite round the hole, and then it will readily unite and heal together. The operator should furnish himself with a very keen edged knife for this purpose.

The animal should be put up and fed on green food and bran, or a few oats a short time previous to this operation as well as afterwards until well, not allowing him to fill himself too full with any kind of food during the time.

Never permit a horse to carry a beetle knot on his side or belly; it is such an eye sore to his owner and every one that sees it. Besides this, the guts are very liable to get knotted and twisted up where they protrude, during the violent motion he is accustomed to, often causing colic, spasms and even death.

Castration.—There are various opinions as to the best time of year and age to perform this operation on the colt, as well as on the different modes of doing it, &c. When convenient, I would perform it when the so called sign is right, and that is when it is in the legs and going down. The most suitable time of year to perform this operation (in my opinion) is in the spring of the year, and when the colt is a year old. Or in the fall of the year after, unless it be while quite young and runs with the dam. If allowed to run without until after he is two years old, he becomes restless; when the sexual fire begins to burn with such ardor that he is continually

chasing and running after others whereby a year's growth is lost at least. And if he should happen to die in consequence of this operation, the older he is the greater the loss would be. Besides this, his serving mares at this age, has a tendency to impair his strength, as well as to check his growth, aside from the liability of his receiving other injuries. Castration at a more advanced age often proves prejudicial to the temper, &c. Although I like to see the entire horse, there is no question but that early castration make larger and better proportioned animals, which are better in all respects for ordinary business, aside from the trouble it costs to take care of them.

Among the different modes of performing this operation, the one of turning as it is called, or twisting the cords, so as to stop the circulation to the testicle, leaving it to rot off, I abhor as being cruel and barbarous; besides there is risk attending it of sacrificing the animal at whatever age. The one of placing sticks on the cord does far better than the former, which were covered with a composition made of two parts of red precipitate, and one part of corrosive sublimate made into paste. This sears the cord and blood vessels, and prevents bleeding, sets the wound discharging, and hastens the healing process, which gained for it considerable favor on its first introduction. But this, too, has its objections, viz: Firstly, these sticks have to remain on the cord from fifteen to twenty-four hours, which is an unnecessary torture to the horse, and strains the cords so that it frequently injures his shape and action for a long time.

Secondly, you must place the sticks above the epididymus (or courage balls as they are called by some horse-men), the loss of which are injurious to his mettle; or the cords by being strained in this manner so long, will hang down, and the flesh heal to them so that it leaves a blemish, and be a great while in getting well, or you must cut them off a second time, which is attended with more trouble and risk. Thirdly, and lastly, there is a better way; that is to put on the clamps where you choose, pare the cords off not too close, and sear them well with a hot iron to prevent their bleeding too much; then rub some of the liniment, for which a formula will be given below, on the ends of the cords and surrounding parts; then when you let the horse up, the cords are up where they should be, and this liniment will set it running, and cause it to heal as fast as can be desirable, and it will heal up smooth without leaving any blemish. The incisions to be made for the purpose of taking out the testicle, should always be made in a parallel line with the seam on the outside that separates them, not allowing the knife to come very near to it; and there is but little risk in performing this operation. To make the liniment, take equal parts of henbane plant and balm of Gilead buds, boil these in water sufficiently to obtain the strength of them, then strain and add another part of hog's lard and bayberry, or candleberry tallow; simmer these down together to a thickish liniment. When you use it, warm and add a very little oil of fire weed, with or without cutting it with alcohol; this will prevent bleeding.

DOCKING, PRICKING, AND NICKING.

A good tail adds very much to the beauty and value of a horse, whether it is natural or artificial. Docking is a very simple and easy operation to perform; it consists merely in cutting the tail off any desirable length, which can be done in the following manner: First part the hair wherever you wish to cut off the tail, saving all the hair above you can, by tying it over on the tail. Then back the horse up to some convenient place where the tail will lay on a plank nearly level, and sever it at one blow with some sharp edged tool and mallet, in a transverse direction from the horse, leaving the bone a little the longest on the under side. Then bring the hair down and tie close below the end of the bone without searing. By occasionally breaking the tail over on the back, or pulleying a short time while it is healing, you can obtain a good tail by only docking the horse. Cutting the tail off in the above manner is better than to turn it over on the back and unjoint it, for then the cords are strained most on the under side and cut off, which will have a tendency to pull the tail down instead of up.

Pricking.—Although some may think best to let well enough alone (as they say), for they have got the idea some way that it weakens the horse in the back to set up his tail, still they will contend that docking is an advantage to the horse because it makes him fill up better in the hind quarters, and makes him tougher.

Now this is owing in part to a want of knowledge of the anatomy of the horse, for all the cords and tendons

that are separated in pricking are divided in docking. And the main support of the tail and back is on the upper side of the tail, and consists of cords and muscles which are more numerous and lay closer to the bone than those on the under side, which are only two of any importance, and the only use of these appear to be to pull the tail down. These two cords are situated, one on each side of the bone of the tail, and near the edge of the hair. There are three blood vessels also on the under side of the tail, the two largest of these being placed on the outside, one directly under each of the cords, and the smaller one in the centre or directly below the bone. In the ancient method of pricking, these blood vessels were all severed, letting the horse bleed very profusely, which weakened him more or less, for the time being any how, and should be avoided as it is in the more modern manner of performing this operation. Pricking may be accomplished (after the horse is secured sufficiently for safety), by merely dividing these two cords or tendons on each side of the tail, nearly under the second joint from the body. One place is sufficient, though if you should prefer it, cut off the cords again about two inches from the first incision, with a small sharp-pointed knife, with the edge running only about one inch from the point and made concave the rest of the way, or well rounded off so that it will not cut; then hold the tail up with one hand, and run the knife in with the other, near the edge of the hair, being careful to cut the cord quite off and not cut the large blood vessel which lies immediately beneath, being sure not to let the knife touch the

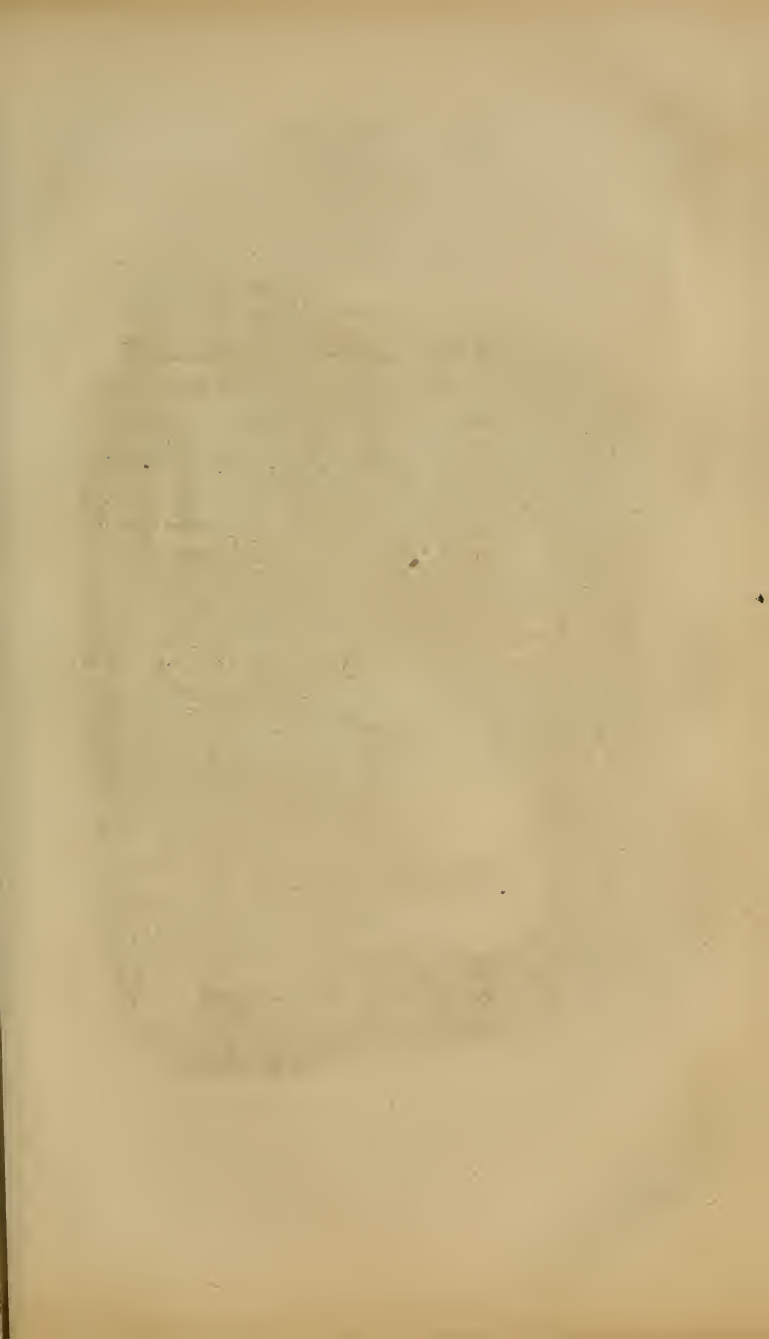
bone. You can easily tell when the cord is cut off by holding your thumb on the under side during the operation, and the giving away of the tail. A horse that is intended to be pricked should not be docked until you have done pulleying him, for the hair you pulley by is apt to come out unless you prevent the fever created by the wounds and pulleying. Continue the pulleying until the tail is well, observing time for rest, and then dock the desired length. When you begin to pulley, rub the wounds with the liniment given for castration, and after with copperas water; wash the tail twice a week with alum water; let his diet be light and of easy digestion; give him a good bed, sufficient rubbing, and time to rest himself while in the pulleys.

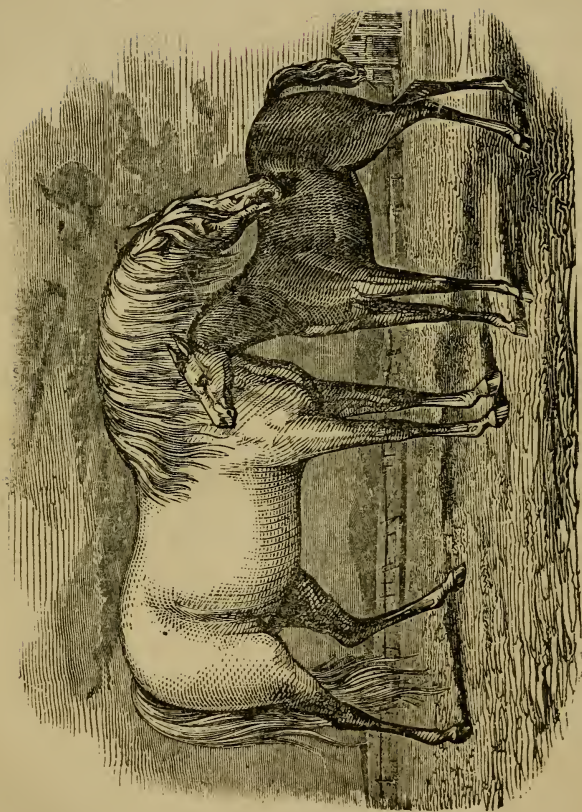
There is more in taking care of the horse's tail and pulleying, in getting a good tail, than there is in performing the operation of merely cutting the cords off; and when this is well attended to, he will thrive in a remarkable degree and grow fat, together with a good tail, while you have attained the highest degree of elegance that art can give in this respect.

Nicking consists in cutting the cords off in several places, about two inches apart, and hooking the ends up with a crooked needle, so as to lay hold of them with a pair of pinchers, and then skin the cord out.

For myself, I prefer pricking to nicking, for various reasons, viz: You nick a horse and fail to get a good tail, and he is ruined forever; but on the other hand if you should happen to have bad luck in pricking, you have a chance to try your luck again, and when you get

a good tail in this way, the horse looks as well, if not better than by nicking him. And when a horse is badly nicked he loses the simplicity and beauty of nature, and you can never give him the elegance of art. It is attended with greater risk, and certainly more cruelty, and I hope it will be wholly dispensed with hereafter.





CHAPTER XXV.

ON BREEDING.

"Come let us be merry and wise."

Breeding is a very important branch of industry to the commonwealth, as well as a profitable business to the farmer; although it seems to have been much neglected in some districts, and especially where the cow or dairy has taken the ascendancy over almost everything else. But even our dairy-men now, and the farmers generally, begin to realize that the horse has been sunk too low in the estimation of society, and the raising of them too much neglected for their own interest. To say nothing about improving the different breeds, we have some that appear to be coming to a right understanding of these things, and more especially when they happen to want a pair to do their drudgery, and have to count out from three to five hundred rocks for them, and get nothing but drones at that. Others hold on to their old teams until they are worn out all but the stubshot, to give them time to raise young ones to take their places, and not unfrequently spoil them with hard work before they are old enough to be harnessed at all. Now, if they would turn their attention to raising and improving the present stock a little more, they would soon find it would favor their best interest to do so; and they would soon have the country filled with a breed of horses that we could justly feel proud of. It is our duty to do all we can towards giving the youth of our country a

liberal education, while we are receiving for that purpose so much material aid from the public treasury, in order that they may grow up to be good and useful citizens. Then why not profit by the encouragement given us by our legislatures, and the organization of our national fairs, &c., for the improvement of the breed of horses we have. Good men need good horses; the first are an ornament to society, the last add wealth to the world, while there is pleasure in seeing both. The middle and western states have some fine horses—some excellent ones; and Vermont, with her sister states, is justly entitled to great credit for her celebrated stock of Morgans and Black Hawks, as well as the southern states for their fine English breeds and the turf horse. I know there has been a great effort made by some to discourage the improvement of this noble animal; but it has generally arisen from some selfish motive. Some have labored hard with the pen (but happily in vain) to see the mule take the place of the work horse; and others equally so with the tongue (for there is nothing that so empties the heart as this member, though lip and heart are often at war with each other), because perhaps they had some worthless animal of their own they hoped to raise the credit of, by destroying the reputation of a better one. The first of these might as well try to advocate the cause of the negro for this purpose, as that of the mule. For my part I prefer the horse to either, and look forward to a better time coming, when the farmer will look to his own interest in this matter, if not to that of the commonwealth.

Great care and sound judgment should be exercised in

choosing animals to breed from; and as much or more depends on the dam for this purpose as on the sire. She should be of good size, and of strong constitution; good feet, fine limbs, but rather flat than otherwise, small head and ear, eye prominent, of sound body, good disposition, and, withall, of good action. As to age, it matters not so much; old ones are thought to bring as good colts as younger ones. In choosing a horse, you should select one that is not disproportionally large, or too small for the mare, for by so doing you lose the excellence and the good qualities of both. He should be in possession of his full strength and power of bone and muscle, and not allowed to serve too many mares; for this is alike prejudicial to the horse and the strength of his progeny. He should be young rather than otherwise; and if he has most of the requisites laid down for the mare, all the better, with a pretty crooked rib, short on the back, deep up and down through the chest, broad breast, with a good neck and tail, and of good symmetry, throughout, he fills the measure of a good horse—that is, the distances should be equal from the point of the shoulder or breast bone, to the point of the withers, from the withers to the point of the hips, and from thence to the point of the haunch or buttock. This gives a well proportioned shoulder, not so heavy as to retard the action. A short back which always accompanies a good loin, denotes strength. A good haunch (according to horseology) enables them to open and shut with the shoulders, being a good requisite for the turf. With these requisites you can not fail to be successful in breeding, for like produces like. But it is hardly to be

hoped that you will be able to find them all combined; and when you can not, get as many of them as possible.

During gestation, the mare should have good keep; she should not be kept too fat nor too lean, with sufficient exercise by letting her run in a yard with shelter attached; or if kept up to work, which she will be capable of doing a great deal without injury, providing she is carefully managed by being fed and worked regularly, but should not on any account be worked so as to tire or fatigue her, she should by no means be compelled to wallow and flounce in the deep snows of the lumbering districts, as is too often the case in those regions. As the time of parturition draws near, she should have her shoes taken off and be allowed a large stable without being tied, and have plenty of roots to eat with her hay, or be turned into good pasture which is preferable. Previous to this, and during gestation, if she is worked, feed a quart of wheat a week, which will prevent abortion. But avoid feeding rye, buckwheat, or giving slippery elm tea, and do not allow them to see nor smell fresh meat or blood at all, for the same reason. And another thing should be remembered as the time of parturition draws nigh, which is, it is an instinct of this species of animals to get near or into brooks or ponds of water at this time, which is more particularly so with young mares, whereby many a fine colt has been drowned before the owner had seen it. Some people would think it strange! a great pity! and just their luck (as they would have it), whereas, if they had known the nature of these animals a little better, they could have prevented this misfortune. Therefore it is well to avoid turning

them into pastures where either the mare or colt can get into the water. The mare should be carefully watched at this time for fear of her wanting assistance, as is sometimes the case; and after a reasonable time and effort on her part, if she does not foal, you should examine and ascertain whether the colt is in a natural position to come forth or not. The proper position is the fore feet and nose foremost, and if not, place it in that position, and when her throes come on, assist her by gently pulling on the colt, but at no other time. In protracted or difficult parturition, and where the labor pains appear to be subsiding, in order to stimulate the uterus to renewed and increased action, the ergot, or spurred rye, may be given her in doses of a teaspoonfull of the powder once an hour until it produces the desired effect. But no other force should be used than that stated above, unless it is in extreme cases. This powder should be given her in a warm and strong tea, made by steeping the leaves of the common red raspberry in water. There is still another reason for watching the mare at the time of parturition, which, perhaps, it will not be amiss to state. The colt is often foaled with the blanket (as it is commonly called) whole, or as I have sometimes seen it completely covering its head, and unless it is immediately removed either by the mare or the struggles of the colt (and sometimes he has not the strength to do it), he very soon strangles and dies unless saved by some one in attendance.

Colts, the first week of their existence, need watching and care, as they are sometimes foaled before parturition is matured, in which case the front teeth often need to be cut

with a sharp knife before they can suck well, and then they are apt to be costive so that nothing passes the bowels, and this is often accompanied with a difficulty of making water also, and, unless relieved, they die from these causes alone. Now when this happens to be the case, give them a few spoonfull of sweet milk well sweetened with molasses, and inject some of the same after adding a very little of the pulverized root of rhubarb. This is all that will be necessary to remove the difficulty. Colts at this age are sometimes troubled with a weakness of the fore legs, so that they knuckle over and can scarcely stand or go—that is, the muscles of the back part of the fore legs are so contracted, and those of the fore part becoming weak and relaxed, that it gives them the appearance of having broken knees or fetlocks. Now supposing you had a board that was badly warped, and you wished to straighten it, you would wet the hollowing side in order to swell it, and heat the opposite side in order to shrink it, and in this way you would succeed in bringing it straight again. Thus it is with these warped legs; bathe the heavy muscles of the back and upper part of the arm with warm water, and wash the fore part of the leg and joints with a decoction of the white oak and sweet apple tree bark; this is strengthening and a powerful astringent, and to the colt should be applied but sparingly. In colts, this weakness of the joints is sometimes caused by a relaxed state of the bowels or dysentery, which causes a general weakness. When it proceeds from this cause, give the colt the following dose, viz: Take a teaspoonfull each of tincture of laudanum, camphorette spirits, essence of peppermint, and

black pepper; add half a pint of warm water and feed it to him with a large spoon.

Some may have a curiosity to know before the colt is foaled whether it is to be a horse or mare colt; if so, watch the mare at the time she is making bag, and if the right side fills first and keeps the largest, you may expect a horse colt, and if the left side springs first, &c., you can expect a mare colt. As far as my experience goes this has been almost invariably the case, though there are undoubtedly exceptions to this rule.

It may be beneficial to some one to know how to determine the color and height a colt will attain when full grown. Correct conclusions may be arrived at in this respect in the following manner: The color in after life will be the same as it is (or nearly so) on the colt around the eyes and hairs on the nose, anywhere from four days to four months old. There is a rule to go by that a man may know, within a very trifling variation, the height a colt will attain when full grown, by which he can tell something about what sort of a horse with proper care he is to expect. When the colt arrives at the age of four months, or as soon as it is perfectly straightened in its limbs, measure from the edge of the hair on its hoof to the middle of the knee joint, and for every inch that it measures here it will grow to the height of a hand of four inches when its growth is matured. Thus, if the distance be found here sixteen inches, it will make a horse sixteen hands high, or vary according to the proportional distance found at this place. This rule holds good for all the small class of horses, and equally so with

others, only with a very large one you must add the depth of his hoof, or about three inches in order to make his full height.

The foal should be allowed to run with its dam until it arrives at the age of four or five months before it is weaned; this should be effected without its worrying or pining after her any more than can possibly be helped. A very good way is to tie them in the stable alongside of each other for a few days; this will prevent their worrying after each other. At this time, if there should be any difficulty apprehended in drying up the mare's milk, all you have to do to obviate is to cover her bag with sale molasses, well rubbed in with the hand, and it will not fill afterwards. This is no less simple than sure to have the desired effect. When the colt is put up to wean, it should have the best of hay or rowen, and sufficient bran and oats to keep it in a thriving condition; and when thoroughly weaned it should be allowed a dry yard and open shed to run in, and also have plenty of good, nourishing food to eat, for the better they are kept while young, the sooner they get their growth, and the better animals they make afterwards, and can be kept at a less cost. Their limbs also will be firmer and better knit, providing they have sufficient exercise. The idea that stinting colts while young would make tougher and hardier horses of them, has arisen from people feeding them high and keeping them too much confined, thinking that by so doing they would beat their neighbor, or get a high price for them at an early age. But exercise is as necessary to give strength and elasti-

city to the limbs, as food is to give vitality and vigor to the body. I am willing to admit that, being fed high and kept in this confined way, they can not endure much hardship at first, nor until they have been exercised moderately, or by degrees, sufficiently to have acquired strength of body and limb to be able to perform what may be required of them without injury; for when they have been put to hard labor on the start, as the case sometimes is in consequence of changing owners, the purchaser, not knowing their situation, expects a great deal of service from them, and is often wofully disappointed when he finds his horse ringboned, spavined, or dies with lung fever or dropsy of the heart. Now the reason of all this is for want of sufficient exercise while being fed in this way, and not in the feeding alone. The horse requires a good deal of exercise at any age, but more especially when high fed in order to have him fit for immediate use, or to set out on a long journey, as experience has taught us, which is the best authority that I can give.

The time has been when a mare colt was thought by many to be almost valueless, or hardly worth raising for the market; but that time, with many other false notions (if there are no more to follow) has passed. They are now thought to be by many as valuable as a horse colt, and are even chosen in preference to him by some, for the following reasons: From the time they are two to five years old, they are not of much account as far as work is concerned, although they are capable even at this age of enduring as much or more without injury, as the gelding; besides, they can be profitably employed in

breeding. You can raise two colts during this time, from them, which improves the mare, both in size and form, and you have the colts in the bargain. Besides this, they are less liable to disease, are as good travelers and better stagers, &c.; and when they are worn out for the road, as it were, they are still valuable for breeders—that is, many of them. Mares kept exclusively for breeders, should be allowed the horse at a proper season. They will almost invariably be in the heat the ninth day after foaling (though sometimes a day or two sooner or later), and are very apt to conceive if turned at this time, being seldom in heat after this period, while suckling the colt. See recipes Nos. 72-77.



THE STALLION.

Great care should be taken in feeding this animal during the service season. In order that he may not become exhausted, and be a sure foal getter, he should not be let to more than from thirty to forty mares in one season, for his own welfare and that of his progeny, without some artificial stimulant to strengthen and replenish the genital organs, more than he takes in by way of food. It is well known to the owners of this kind of horse, that when they have let him serve from fifty to one hundred mares, their horse was injured in proportion to the number so served, or the colts have been weak or decrepid (if he has any), and not unfrequently both. Now, to remedy this evil, without losing the use of the horse, would be a great desideratum with many; and this difficulty is not to be wondered at when we take into consideration the fact, that one ounce of sperm extracted in this way, is equal to the loss of forty ounces of blood, or two pounds and a half. When we take this view of the case, which is allowed to be correct, it must be evident to any one, that unless modified in practice, it must result in a total prostration of the constitution in the end. Every attempt to remedy this difficulty, so far as I am able to judge (except the one I am about to recommend), has resulted in a loss of tone and derangement of the stomach, whereby the remedy has proved equally bad with the difficulty it was intended to obviate. The stallion should be kept in that state of health that will ensure the greatest degree of excellence in his progeny, which is not the highest state of fatness alone, that is to be admired.

The horse, during the season of service, should be fed regularly, and on solid food. A pint of wheat flour may be added to his oats and corn meal once a day, but he should not be given anything that will nauseate him, or hinder digestion. And if you would have him always ready to face the music, give him one of the following balls every morning about the size of a hen's egg. These cordials are made by mixing together one quart of strained honey, one quart of oyster meats, one pint of the best brandy, four ounces of the superfine flour of slippery elm bark, and kept in a tight jar. Take out only as you want to use, and ball it, which may be scented with anything the horse is fond of, and he will soon learn to eat them readily from the hand.

“ With flying mane and fiery look,
Impatient neighs the noble steed.”

These balls are sometimes of great use in bringing the mare into heat at a proper season, by adding the tincture of cantharides. Give her one every morning; it will not require more than three to bring her into heat. The tincture may be added for the horse occasionally if need be, but for constant use they are too irritating to the urinary organs. I once owned a horse that sired eighty-three colts in one season, all smart and robust, and the horse ended the season as vigorously as when he began. Some may say that the truth is not to be spoken at all times; so say I, but if you speak at all, speak the truth, and this false modesty will fly like chaff before the wind.

“ There is a time to all things.”

Man was not born to sorrow alone; he can indulge in pleasing as well as profitable sports, without even stepping out of the path of peace and innocent pleasure.

To fit a horse for trotting or running, requires all the ingenuity that man is capable of bestowing on him, and has occupied the attention of the best horsemen in the world; for this reason I deem it useless for me to attempt to instruct you on this point farther than I have already done; and the whole, in order to the animal's performing labor and sustaining a continuance of action, to which he would not be adequate without much previous preparation, would not be a very easy task for any one to undertake. By condition, the farmer generally means a high state of fatness; but not so with the amateur sportsman; he means that state of health which produces the greatest degree of strength by reducing the superfluous fat, and bringing the mere flesh into clean, hard and powerful muscle, and invigorating the lungs and other internal organs, so that they may promptly discharge their respective functions, and suffer no damage from uncommon stress, &c.; for a horse loaded with fat could not be expected to be successful in a long race.

TIME TABLE.

The most extraordinary speed that the horse has been able to accomplish, both in Europe and America, will be found in the following table, which is a matter of some interest to the fast men of the age; and it should be preserved, as it has been carefully compiled by the *Clipper* from various authors, both English and American; and in the main is thought to be reliable; but as it is un-

certain whether the distance and time will agree with the present reckoning, is a matter that must be left for the reader to determine:

Horse Running.

It is recorded that Firetail, in 1772, ran a mile in one minute and four seconds.

Flying Childers ran over the Round Course at Newmarket (three miles six furlongs and ninety-three yards) in six minutes and forty seconds; and on the Beacon Course (four miles, one furlong and one hundred and thirty-eight yards) in seven minutes and thirty seconds. He went one-third of a mile in twenty seconds; he also made a leap of thirty feet on level ground; and he covered twenty-five feet at every stroke while racing.

Eclipse is said to have ran a mile in one minute!!!

In 1741, at the Currah in Ireland, Mr. Wilde rode one hundred and twenty-seven miles in six hours twenty-one minutes, employing ten horses in the performance of the feat.

Mr. Thornhill, in 1745, rode from Stilton to London and back, and again to London, two hundred and thirteen miles in eleven hours and thirty-four minutes.

Mr. Shaftoe, in 1752, with ten horses, five of them ridden twice, accomplished fifty and one quarter miles in one hour and forty-nine minutes.

In 1786 Mr. Hull's Quibbler ran twenty-three miles, round the Flat at Newmarket, in fifty-seven minutes and ten seconds.

George Osbaldeston, in 1831, performed the herculean task of riding two hundred miles in eight hours and

thirty-nine minutes, using in the feat twenty-eight horses, some of them two and three times.

It is also on record that Rataplan, in England, 1856, ran a three mile heat in five minutes and twenty-one seconds.

These are among the feats and time said to have been performed in England. We now come to that of our own times and country, which are as follows:

One mile, by Henry Perritt, in one minute, forty-two and one-half seconds.

Two miles, by Berry, in three minutes, thirty-six and one-half seconds.

Three miles, by Brown Dick, in five minutes, twenty-eight seconds.

Four miles, by Lexington, was run in seven minutes, nineteen and three-quarter seconds.

Horse Trotting.

One mile, under saddle, by Tacony, in two minutes, twenty-five and one-half seconds.

One mile, under saddle, by Lady Suffolk, in two minutes, twenty-six seconds.

One mile, in harness, by Tacony, Highland Maid, and Flora Temple,* in two minutes, twenty-seven seconds.

Two miles in harness, by Flora Temple, in four minutes, fifty-nine seconds.

Two miles, under saddle, by Lady Suffolk, in four minutes, fifty-nine seconds.

* It is stated Flora Temple made the best time on record, in the trotting match with Princess, doing her second mile in two minutes, twenty-two seconds.

Three miles to 250 lbs. wagon, by Kemble Jackson, in eight minutes, three seconds.

Ten miles, in harness, by Prince, in twenty-eight minutes, eight and one-half seconds.

Twenty miles, in harness, by Lady Fulton, in fifty-nine minutes, fifty-five seconds.

Fifty miles, in harness, by Spangle, in three hours, fifty-eight minutes, and fifty-four seconds

One hundred miles, in harness, by Conqueror, in eight hours, fifty-five minutes, and fifty-three seconds.

Horse Pacing.

One mile, by Focahontas, in two minutes, seventeen and one-half seconds.

One mile, by Pet, in two minutes, eighteen and one-half seconds.

One mile, by Roanoke, in two minutes, nineteen seconds.

The battle is not always to the strong, nor the race to the swift; but we like to see speed that is founded on bottom.



CHAPTER XXVI.

DISTEMPERS CONTRACTED BY MARKETING.

Thousands of horses are this day in our cities which are diseased in consequence of mismanagement in feeding and want of exercise previous and while en route thereto. And this difficulty is but little heeded or even noticed while it is increased by the present mode of

conveying them by rail and boat over land and water. When people fell into this common error, it caused a delay in selling both in time and price; and the additional expense accompanying the same, make it unprofitable for both dealer and purchaser, and to avoid which is certainly very desirable.

I would rather start with them by land in ill-condition, or even quite poor in flesh, than to fall into this error; and it would save expense to the dealer, and would be better for the purchaser, who would be more likely to get a sound horse. The horse in this condition would thrive while increasing his feed and journeying by land, and would not suffer so much for want of exercise for a few days if conveyed in the above manner as one loaded with fat. If you should object to taking them into the city in this condition, leave them at the outposts, or a convenient distance therefrom, and there feed and exercise them to your liking, and then take them in healthy and sound, when they will command a fair price and meet a ready sale, instead of hazarding their lives by confining them in dark and stifled stables in the city until they are diseased and rendered unfit for use, and are liable to be spoiled with the first day's hard drive; and this, too, would bring your customers to you, instead of your having to run after them.

But to come to the point; horses after being fed high, and stimulated with grain and other things, and poorly exercised, are but illy fitted to undergo the sudden changes of air consequent to a long journey through the fog, hot and cool breezes in crossing our lakes, traversing rivers, and being hurled along the plains in the cars, &c.; they

often take slight colds in this way that are not noticed, or neglected, until it causes a derangement of the stomach and bowels, which impairs the appetite and digestive powers; what is worst of all, when they arrive at their journey's end, they are too often crowded into dark and ill-ventilated stables to complete their misery. This is the way in which many diseases of the horse are caused, stuffing up the thoracic organs, and sometimes exciting a cough and a slight running at the nose, which may often lead to other disease and general debility, for the above exciting causes show themselves in various forms according to the predisposing condition of the system. To prevent the above difficulty, when you are to convey them any considerable distance, give as a stomachic to invigorate and strengthen the system every morning, before feeding, in ball, a small dose of peppermint, camphor and red pepper, with good exercising. For a day or two previous to arriving in the city (and after also) use a little of the nose ointment on the septum, &c., given for glanders, which will enable you to go in safe and remain sound, with good stable management. But if you should at any time discover symptoms of distemper, make free use of the condition powder No. 1; with a continuance of the above, and you will come out all right. Consult the remedies given for infectious diseases, &c., &c.

Then sometimes horses are injured in taking them by the overland route, too. They are often driven too far the first day of their journey, not being accustomed to traveling on the road; and then again their masters



sometimes overtry their abilities for endurance, in consequence of becoming a little excited on some topic of the day themselves, or get a little too much of the *crathur* in the head. And sometimes this happens when they are going to market with other articles, or riding from town for pleasure, &c., for there are various ways of abusing this noble animal.

Symptoms.—If the driver goes to bed at all, he rises rather late the next morning, and on going to the stable, if you find the horse with his back still wet with dew immediately over the kidneys, after all the rest of his body is dry, it is a sure evidence that he has been driven too hard.

Cure.—The next time the man goes on a spree, let him go alone, and give the horse a moderate dose of oats, adding a good brushing and comfortable bedding; thus remove the cause and I will warrant the evil to cease.

A GOOD HORSE.

Some men are quite apt to go to extremes in their judgment upon the value of a horse. What one man would call a good horse, others will call good for nothing. Now the Maker knew well the pattern he worked by, for in variety only are found fitness and elegance which contain the spice of life. Thus all may be suited if they only knew themselves what they want, and learn to choose one that is well adapted to their minds and business.

Supposing, for instance, that the mechanic should set himself to work and make a fine looking wagon or car-

riage out of pine or basswood, using sole leather for the tire, the man who bought it might be disappointed, for it would not do him the service he had expected. Well, now has he any reason to find fault with the workmanship, which he examined for himself? I think not. Well, should he curse the timber of which it was made? Certainly not; for it is good for the purpose for which it was designed. But the deception consists in a misapplication of the material of which the wagon was made, which was not intended to take the place of iron, nor the white oak and sugar maple. Thus it is with horses; they are all good in their proper spheres; they may be bred too delicate of constitution or limb for the climate they are employed in, but this is no fault of theirs. The wants of man are so varied that there are none of these animals found so large or small, swift or slow, but that they may be profitably employed for some purpose or other.

The minds and tastes of men differ as much (and perhaps more), than the size, shape and color of horses; therefore it would be a pretty nice piece of work for one man to accomplish, to select a horse that would please all his neighbors in every respect. Therefore, when I see a horse that is well adapted and calculated for the business that he is employed in, whether it is on the farm or the road, on the canal, in livery or menagerie, in saddle or harness, I call him a good horse. But a clearer view of my idea or fancy of a good horse, and one that will be most likely to please the eye of many, may be had by referring to my description of the same in the chapter on breeding, &c.

Give me a horse with a good shoulder (not too heavy), with his fore legs far enough apart to give ample room for the play of his lungs, and a good stifle; then he has room to carry his dinner with him. With these requisites, and a good pair of legs (for the whole value of a horse is in his limbs), he will do very well for all work. As to color, I think it makes but little difference, other things being rightly considered, but is a point of taste as a general rule. Some argue that a dark colored horse has stronger muscles, and is more durable; but if we allow this to be so, it may be overbalanced by the wiry nerve, and a higher degree of intelligence possessed by those of a lighter color. A dark or brown colored nose, with heavy mustache, always denotes good bottom.

COMPARISONS.

The so styled father of medicine (Hippocrates) did much in his time and way, undoubtedly, for the benefit of his race, in the discoveries he made in the healing art; and a vast amount of good has been accomplished by the different reformers since his time in this way; hence it becomes our duty to improve all we can upon the advantage thus offered us, and perhaps future generations will still have more to do before they bring this science to a state of perfection.

Perhaps I may be pardoned if I should venture to draw a figure here to illustrate some of my views on the subject before us. For instance, when people are habitually costive, they learn to regulate their diet by a free use of beans, onions, or Indian corn, and pumpkin bread, or other things that nature helps us to provide in the form

of food; they will find but little use for the bitter root and steaming, which may be used to such an extent, as to become in time as injurious to the system, as the older practice of the use of calomel and the lancet. Therefore we see that an ounce of preventive is equal in value to a pound of cure. Did you ask what has this to do with the horse? We will see directly. In most cases of disease where a physician is called, it is the animal feeling and powers that are diseased, whereby the physical strength is lessened. So, what is good for man is also good for the horse, and has about the same effect on the one as on the other, generally speaking, under similar circumstances; but when the mind or mental faculties are impaired, then it becomes quite a different thing which we have nothing to do with here.

Now, supposing a horse to have the heaves, and you feed him with clean, bright straw, or stalks (instead of musty hay), and also let potatoes, carrots and apples form a part of his diet, and he will perform as much work as before he was diseased, and seldom show any symptoms of the disease. Well, now, had he lived on this kind of food previous to his being attacked with this disease, and had not been allowed to take cold, would it not have served as a preventive against the disease? Reason teaches us that it would most certainly. And so it is with most diseases of the horse. They can be prevented by judicious feeding, careful driving, a close observation of and supplying their many wants. To this I am mainly indebted for my success. I have been as seldom puzzled as a great many others in telling what part of the ma-

chinery was out of order, or to find a remedy for their relief.

In sections of country where the heaves are a very prevalent disease with the horse, a great number of its inhabitants die of consumption; but in some parts of the western states for instance, the horse is seldom if ever known to have what is called heaves in other parts of the country, and there the people know nothing comparatively about consumption. Thus it behooves us all to study into the causes of disease, and also their best remedies and preventives, for the better we understand these things, the better we shall be prepared to combat them when overtaken by them. The wise will not trust wholly to the doctors in this respect, for they live on the ignorance and misfortune of the people. (Well, they do not live alone if they do.) But some one may think the doctors must live too. That is very true. Every one should live by his own industry; but any one worthy of the name, will keep himself in advance of the common people sufficient to answer as a safeguard for him. And if it should be otherwise, they would only be placed on an equal footing with others in producing the necessities of life (by the sweat of the brow), instead of destroying it, which no lover of peace and law-abiding person would have reason to find fault with. But as the great book of nature was opened for all, we all have an undisputed right to peruse its leafy pages, and treasure up what knowledge we obtain from its teachings, for our own benefit as well as that of others; and the better we understand this great work, the better it will be for the regular physician, and the better it will be for all. The

science will flourish better when it enables him to command a better price for his labor, and there will be less suffering, less imposition and quackery in the world.

A change of diet almost invariably has a salutary effect while treating most diseases; for instance, in fevers and inflammation, let the diet be more simple, cooling, &c., &c.

CHAPTER XXVII.

ON TRAINING AND EDUCATING THE HORSE; TOGETHER WITH ANECDOTES, &C., ILLUSTRATIVE OF THE SAGACITY AND FRIENDSHIP EXHIBITED BY THE HORSE AND OTHER ANIMALS TOWARDS MAN.

To raise the genius and improve the mind, the old psalmist played on a harp of many strings.

It has been wisely said by one of our ancient philosophers, that the greatest study of man was to know himself. Now when we have fully learned our own genius and capacity to control and manage the horse perfectly, in all the various branches of his education that he is capable of arriving at, which now is only in its infancy, we shall have attained a high degree of eminence towards that end. And then we have been privileged by the highest authority to have dominion and rule over all the beasts of the field; or, of the whole animal creation we were to be lord and master. We were not told in a word how to accomplish all this, but we were given wisdom sufficient, when applied to this purpose (which was left

as a part of our duty), to find out our superiority over the animal creation in this respect for ourselves.

In order to have perfect control over the horse, and govern him properly at all times (instead of being governed), there is one thing highly necessary. In the first place we must learn to govern ourselves, that is, govern our passions, and never lose our presence of mind through fear, nor allow ourselves to fly into a passion, or get excited on any account whatever, nor chastise the horse in anger any sooner than you would a child. He that does this well will seldom, if ever, be compelled to whip either with the rod. He will soon learn that there is a nobler way to accomplish his purpose, which consists in the superiority of mind and reason that he holds over him (which is the gift of God), and when fully developed and used for this purpose, with the means hereinafter mentioned, will be more than sufficient to govern this noble animal. Fear (in one sense of the word) is the absence of reason, therefore to rid ourselves of fear let us exercise what reason we have given us. A person may give way to fear and work himself into such an excited state of mind as to dethrone reason altogether, and then become a perfect maniac. Many a one has lost his life, or even died through fear alone.

All horses are susceptible of receiving more or less knowledge, according to their individual organization; and the higher mettled, or the more ambitious a horse is, the easier he will learn when the law of kindness is applied, and the harder it is to subdue him by brute force. A careful observer can readily tell a horse that will learn easily by his phrenological development, or the degree

of intelligence that he is capable of arriving at, &c.; among the requisites of which are fine limbs and muzzle, head not too disproportionably large for the body, ears small or slim, not too far apart and of quick motion, eyes prominent and wide apart, and large nostrils; white feet and face are not objectionable in this respect, and a hollow face denotes speed and high spirits; though a round face and Roman nose indicate a degree of docility that is seldom met with in others, if the head is not too narrow above the eyes. There must be sufficient room in the cavity of the skull for the mass of brain that is so necessary for this purpose (notwithstanding the other requisites), and which is the mainspring of all motion.

The ancients seem to have employed their horses mostly for the purposes of war, and that of the chariot race. The training of them, both for war and the race, seems to have occupied much time and attention, and to have been conducted with a degree of skill which could not have been attained without considerable study and experience. Pliny truthfully said that by the ears of a horse you could discover his intention. Buffon also remarked that when a horse walks, his ears point forward; when fatigued, they hang down; and when angry, one ear points forward and the other backward. The eye as well as the ear plainly tells the intention of a horse; when the head is rather bowed, and the eye, with the effort to look out, is not much moved in the socket, with considerable expression of the surrounding parts, as often winking, &c., all is well; but when the head is only a little raised, with the eye-balls turned so as to show considerable white of the eye, and the ears lay close to the

neck or point backwards, then look out for teeth and heels, which are their weapons of war. Every horse turns his eye as well as ear to that side from which he hears a noise, and, when struck from behind, he turns his ears backwards as an expression of dislike; or, in other words, the ears always point the way he looks.

“The notion of fire rolling within his nostrils, is highly descriptive of the natural appearance of these organs when the animal neighs, or is much excited. This is occasioned by the unusual flow of blood which becomes distinctly visible through the fine membrane with which the nostrils are lined.”

The steed, says Virgil, should first be accustomed to see without fear the arms of the warrior in fight, and to endure the clangor of the trumpet, to listen to the bridles rattling in the stalls, and to hear the rumbling of the chariots over the ground. And while yet a colt, he should be soothed with kindly tones from his master's voice, and gently patted on his neck till he comes to rejoice in being commended and flattered.

In training the colt for the ring or the chase, the old masters began with him at the age of three and four; and he was trained to run in the ring with measured pace, to bend his legs with ease, and to prance in “changeful curves.” His speed was to be gradually increased “till he seemed to challenge the wind as he fled with ardour over the level meadow, unconscious of his reins, skimming so lightly as scarcely to print the surface of the sand.” After being trained in the above manner, the animal was to be fed plentifully with corn and other fodder, until the body became large and robust.

“But if pampered with corn before being trained, he will become stubborn, and though held, he will sometimes rebel against the lash and the curb.”

When the horse is in the habit of shying or sheering at anything on the road, do not whip him for it. It is sure to make him worse. For whenever he sees the same object again, it reminds him of the chastisement he received before; but let him know that you are his friend, by using kind and soothing words and gentle usage. Although you may speak in an authoritative tone sometimes, if necessary, stop him and let him approach the object of his fright, slowly and cautiously, and you will soon break him of this bad habit. The eye falsifies objects, which are the cause of the animal's shying and fright; therefore he wants time to satisfy himself that there is nothing to hurt him, either by seeing or smelling.

When you are driving a horse before a carriage, and he gets frightened, and starts to run, if you allow yourself to become frightened and excited at the event, or show any sign of fear (which it is very difficult to avoid, I will admit) by hallowing, or in any way so that the horse discovers a cause, he catches also at the dilemma, and, with renewed rage, it increases his speed and your danger. When you can possibly avoid this, and speak in a calm and gentle tone to him, together with the help of the reins, you will soon calm his fear and all will be well. As illustrative of the above facts, I will relate a circumstance that took place not long since in my own town, and with reliable friends: A gentleman and wife were returning from a ride in a carriage, and when about a mile from their village home, while descending a steep

hill, some of the harness gave way, and let the carriage on the horse which frightened him, and he began to kick and run down the hill, when the man leaped from the carriage, telling his better half to do the same. But this happening in the fashionable days of crinoline, it was not so convenient for the lady to do so in this way; so she (while the horse was at the top of his speed), with great presence of mind, and possessing the ability that her husband lacked, composedly reached over and picked up the reins that he in his fright had dropped, and in woman's quiet manner, very soon succeeded in stopping the frightened animal, and then as quietly stepped out of the carriage and took the horse by the bit, and was caressing him when the man came up to her assistance, if such you could call it. I have read somewhere that a good wife was more precious than rubies, and I think she must be one of them.

I am well aware of the fondness or reluctance of the horse to leave buildings while they are on fire (which is a kind of instinct), for you may drive or back a horse up to a fire, and as it begins to burn him, he will draw closer and closer to it until you can scarcely force him away. Hence comes the great difficulty of removing horses from the stable when the surrounding buildings are in a state of conflagration, whereby so many valuable horses have been lost. Notwithstanding all this, the difficulty generally arises from the excitement that prevails on such occasions, when you lose all control you had over them. But if you would avoid this, approach them at such times with no unusual degree of alarm or excitement, and speak to them kindly, and, for instance,

throw the harness over their backs as though they were to go about their usual work, and they will obey you at once, and thus be saved from the perils of the flames. Now these facts I have witnessed. Truth cannot perish; it is everlasting, it is heavenly.

In order to show the wonderful sagacity of the horse, and the great attachment and friendship that may exist between him and man, as well as other animals, and man's capacity to govern them under a proper mode of treatment, I will give place here to a few well authenticated anecdotes of some of the most important animals in the world, which go to show also what man can accomplish when destitute of fear or excitement of any kind.

I will begin by relating the (almost incredible) story as given by Ezra Smith, of a voyage among the South Sea Islands, where the vessel was wrecked and the only one of the crew saved was finally landed on the deserted shore of an uninhabited part of the island. Alone with a small compass he happened to save by having it in his pocket, he directed his course towards the nearest place known to him to be inhabited, which was several days' journey. After traveling all day, at night he lay down to rest his wearied limbs, with only the precaution of building a fire near his feet for the purpose of keeping off the wild beasts that inhabited that country. Shortly after lying down, he heard a heavy tread near him, and immediately arose and saw a huge lion approaching him. Being of iron nerve, and thinking that the time had come that he must die, and that he might as well submit to his fate calmly, he quietly awaited the ap-

proach of his deadly foe, which was made cautiously, halting several times, and at last came close to his fire. After eyeing him very closely for sometime, and finding him not in the least daunted, he held his foot up in the light of the fire, the man then discovering that his foot was dreadfully swollen, and thinking that at the worst he could but die, at once commenced an examination of the foot, in which he found a large sliver or stub, which had caused it to fester and become swollen. He deliberately took his knife and opened the foot, dug out the stub, talking caressingly in the meantime, without either of them betraying the least sign of fear. After performing the operation, the man took his seat near the fire, and found to his great astonishment that he had a friend with him instead of an enemy, in the shape of a lion, for the lion came and licked him, and lay down by his side during the night, and the next day went several times and caught wild game for him to subsist on, and even followed him like a pet for several days. Now supposing the man had allowed himself to become frightened and excited on this occasion, there can be no doubt but that the lion, seeing his timidity, would have devoured him at once.

As I have given one of the lion, I will add another about the great memory of this animal, as it is allowed by experienced men that the horse equals, if not excels, most other animals in this respect. Herr Driesbach, the great lion tamer, after leaving his old companions, the lions, leopards and tigers, for years, returned to revisit them in their cages, where the scene is described as having been most affecting. The lioness, which was

a particular favorite, caught sight of him, and her eyes beamed with pleasure, while her tail wagged a glad recognition. On his coming up to her, she appeared frantic with joy; and when he spoke to her and presented his face to the cage, she kissed him and placed her paw in his hand with the air of an intense affection, and licked his hands while he attempted to pat her.

And then there was another of Herr's, the elephant. A circumstance happened while the menagerie was coming into Newark. The elephant's keeper fell from his horse in a fit; the whole company came to a halt, and one of its members went forward to pick up the sick man, but the elephant would not allow him or any person to approach the lifeless form of his master. Taking him with his trunk softly, he would place him on his horse, but finding that the man was senseless, he laid him on the ground and kept watch over him. Several members of the menagerie tried to soothe the faithful animal, who had now become furious at the supposed death of his friend, but to no purpose, and there the man lay watched by this sagacious animal. After lying in this condition for some time, a physician who had been sent for arrived, and yet the elephant would allow no one to approach the man till at length the keeper became so far conscious as to command the elephant to let the physician come near him, and then the animal was docile and obedient in a moment. The keeper was cared for, the elephant all the while expressing the utmost anxiety for the sick man.

Were these animals spoken of above forced wholly by blows of the whip to love and obey their masters?

Most certainly not. Now I have given an illustration of the king of the forest, as the lion is called, and also of one of the largest quadrupeds of the present time, in the foregoing anecdotes, thus showing how memory, sympathy, pity and affection are all blended together in these animals towards man, and his power and ability to render them subservient to his will and have dominion over them. Now is this instinct, is it reason, or what is it? I pause here for an answer, though I will endeavor to answer the question in my way when I speak of the horse. But who will dare fix the limits of the instinct or reasoning faculties of the animal creation?

For fear that I have already wandered too far, I will return again to the horse, which is one of the most tractable, having the greatest memory, and is withal one of the most affectionate and sympathizing animals among the larger quadrupeds in the world. To prove the first of these assertions, it would only be necessary for you to pay a visit to Dan Rice's great show, or Franconi's hippodrome, and there see the horse perform some of his wonderful feats, dance, waltz and keep perfect time with the music, equaling in this respect a first class dancing master. And then he has done this on the stage where the floor was chequered with eggs, in squares of two feet apart, without even moving one of them. Although the horse is assisted by the motion of the rein and whip in keeping time in the performance of these plays, he does not do it without considerable intelligence on his part. If you have any objections to being satisfied as to the truth of above, by visiting the circus, you should remember that if there is any evil produced by it, it will

come from a misapplication of the knowledge thus derived. The same skill required to manage the horse in the ring, would enable one to ride all over a patch of corn or potatoes without even treading out a single hill; and then again, amusement of some kind is as necessary for the support of a healthy mind, as food is for the body. To have proven the latter, you should have seen, as thousands did with me, that old white war horse of Gen. Taylor following the hearse that bore his late and lamented friend to the tomb, with his head drooping half way to the ground, as if in deep thought, or filled with pity and love for the hero, and his late master.

And then I have seen the young and spirited horse stand over and watch his master who had fallen from his back while drunk. I have seen the horse, also, while carrying the inebriate on his back, actually dodge one way and the other in order to balance his rider, so as to prevent his falling off. Which of the two animals manifested the most reason here, do you think?

Then the war horse has been seen to dash on to the charge at the sound of the bugle, with all the courage of a veteran soldier. Away he would dash through blood and carnage, wherever his master guided him; and when, perchance, his rider fell, he would stop in the midst of his heat and fury, and become pensive and mournful, sympathizing with his wounded friend; or, when dead, has been known to rush on with renewed vigor into the enemy's ranks, stamping them to the earth wherever he went, to avenge his master's death.

The poet has given a fine description of the war horse, in the following lines:

“ If then the distant clang of arms he hears,
He paws, he bounds, he pricks his listening ears,
Quivering his joints, and snorting with desire,
Within his nostril rolls the thickened fire;
Adown his crest his locks recumbent stray—
O'er his right blade the bushy honors play,
His horny hoof upturns the hollow ground,
And rings the air in grave and solid sound.”

Who, when they study the nature of the horse and consider his superior muscular power, can think of lowering himself (as he must) to subdue him by force alone? I have broken a great many colts for the saddle and harness, and I never knew one of them to prove balky or vicious afterwards; and I have cured many a one of his vicious habits that was supposed to be spoiled by others. And here let me say to you, that if you should ever fail to accomplish your design in the manner herein-after set forth, and be compelled to resort to the lash, do not whip the horse in the team where you will be likely to worry the one at his side, nor before the wagon where he is likely to break the carriage or harness, besides conquering you (instead of being conquered), as most assuredly he will, nine times out of ten; and then you are worse off than when you began. But take him out of the harness to some convenient place (a stall for instance), where he is confined, so that he does not hurt you nor himself, and then chastise him as you think he deserves; or take him out of the harness and bit him close, and you will find it a difficult matter to drive him far from you with the whip, for he will oftener follow you around than run away. The reason of this will be made manifest as I proceed.

You should not resort to the lash (if you would have a kind horse), even if you should fail on the first or second trial with other means, nor be at all discouraged. Remember that time, patience, industry and perseverance, are among the grand masters of the world. And it is just as necessary that you do not let your horse know, or find out in any way, that you are afraid of him, as it is to avoid being excited or angry (as before stated). If you do, he is certain to take advantage of it, and you can not control him. Never go up to a horse and slap him without first speaking to him, unless you are positive that he sees you; then stand close to him, for it is useless to try to dodge the ball after you hear the report of the gun, and then you are safer than you would be to stand off and reach towards him with the timidity of a coward, for he has not the chance then to hurt you even if he is vicious and so disposed. There is no high spirited horse that can not be balked; for instance, you ill-treat him by half-starving, overloading, holding him in, or hitching him to anything he can not draw and then whip him, and he will soon become discouraged and vicious; and then there is no horse of this temperament that can not, with proper management, be made kind and true to work in any place you wish him. Generally speaking, there are more balky drivers than balky horses. The reason of this is, they do not understand the nature and disposition of the horse they are tampering with. Balky horses are generally high spirited ones, easily excited, frustrated, get mad, and the more they are whipped for it, the worse they get while under the sting of the lash; for their grit is already raised too high, and they become

furiously mad and quite uncontrollable. But instead of this harsh treatment, they need something to calm and sooth them, and then they become perfectly manageable.

A horse that has been thus ill-treated, will oftentimes allow himself to be caught in the field by a lady or child, and obey them in any reasonable task with kind treatment, when they would refuse to obey a cruel master in doing the same thing. The following text can be had reference to as you proceed with my views on the subject:

With all his other noble qualities, the horse is a coward, by which he can be made to perform feats in the menagerie, through fear of punishment, that he can not be made to do in any other way. This accounts for his sometimes being conquered by coercion. And then there are other acts required of him where kind treatment is indispensably necessary to fit him for the service of the ring (as well as all other places), such as distinguishing sounds, &c., or one word from another. To imitate lameness for instance, or to lay down, is a knowledge he acquires by the familiarity of certain words, with a given signal to obey them. This, some pretend, is a recent discovery among the capabilities of the horse. To them it may be so, but others have long known that the horse could learn to distinguish the words woa, get up, or as the Frenchman says, mustaw, zounds, &c., from all others. But for domestic purposes, kind treatment is decidedly the best, and is the basis of all other proper modes of governing the horse, without which you can not have a kind, true and safe one for family use.

I believe the earth produces suitable vegetation in

some form for the sustenance and welfare of the whole animal creation thereon; and that vegetation contains medicinal properties suitable for the prevention and cure of every known disease, when rightly understood and properly applied; and also among the different varieties, there are some suited to the peculiar taste and smell of every species of animals, by the use of which they may be ensnared, tamed, domesticated and made useful and submissive to the will of man. Those substances which the horse appears to be most passionately fond of, are what I purpose to speak of next. The reduction of him to a domesticated state, with skillful training until his education is completed, is one of the greatest acquisitions ever made by the art and industry of man. The charm, or great secret of taming horses as used by the ancients, is as follows: The horse-castor is a wart-like protuberance that grows on the inside of every horse's fore legs; it has a peculiar, rank, musty smell, and is easily pulled off. The ammonial effluvia of the horse seems to concentrate in this part, and its odor has a great attraction for animals, especially canine, and the horse himself. This should be taken off and dried by a moderate heat, as too great a heat destroys the scent thereof, when it should be grated into a fine powder, and corked tight in a bottle so as to exclude it from the air, and it is fit for use. For the oil of cummin the horse has an instinctive passion; both are said to be original natives of Arabia. When the horse scents its odor he is instinctively drawn towards it. The oil of rhodium possesses peculiar properties; all animals seem to cherish a fondness for it; this, with the use of the others, produces a kind of languid

feeling, or subduing influence over the horse, so much so that you may do what you please with him, and he will not resent it, provided you do not hurt him.

When a colt is old enough to wean and begin to feed, give him occasionally from the hand a piece of sugar, with a little of this powder sprinkled on it; this will make him very fond of you, and he will be seen coming towards you whenever he sees you in field, to get some of it to eat. In this way he will become very familiar with you, and always be good to catch — the contrary of which is a great fault with many.

“’Tis education forms the common mind;
Just as the twig is bent, the tree’s inclined.”

But you should not deceive him by pretending you have something for him when you have not; for his memory is such that he may play you a trick in return by not coming to you next time.

If you are dealing with a wild horse, or one that is hard to catch, you must use a little stratagem with him (as he is quite apt to do with you); rub some of the oil of cummin on your hand and pass him on the windward side of the field as close to him as you can without starting him. Act perfectly indifferent about catching him, or scarcely notice him after passing several times in his way. If he does not come to you before, go as near to him as you can, being sure to stop and stand still before he starts to leave you, and he will soon come to you, when you should let him smell of your hand, and also give him some of the powder to eat on sugar or a piece of an apple, and you will have no difficulty in haltering and leading him from the field. By having something in

your hand he likes, whether it is sugar, salt, or oats, you will not be likely to have any difficulty in catching him afterwards.

There is no operation to be performed in breaking the colt or subduing the vicious horse, wherein he seems to be more sensible of the loss of his liberty, than he does by being bitted; and none where he appears to be more willing to obey our commands, when made known to him, than that of laying him down at our feet.

BITTING THE HORSE.

Whenever he is brought out for this purpose, give him something to eat from the hand that he likes, which makes him fond of you. Then put on the bit and curb, using a large bit for this purpose, until his mouth becomes a little hardened, but not long enough at a time to tire him; if you do you overtax the muscles of the neck, which will have a tendency to throw the neck down instead of up; but begin gradually, day by day, until he is thoroughly bitted; always talk gently and caressingly to him, and he will follow you like a pet.

If he is to be broke to work in the harness, hitch him to nothing but what he can draw easily at first, and increase his load by degrees. If you hitch him up by the side of one that is well broke, all the better. After he pulls well, give him some of the powder, or anything else he likes to eat; but if he refuses to go, blow a quill full of this powder up his nostril, and place about four drops of each of the oils in his nostrils and on his tongue, which you can do by means of a piece of sponge, or a

small thimble held between your thumb and finger, using no harsh means, and he will soon obey your command.

If he is to be broke for the saddle, observe the above rules. Ride fearlessly and promptly with your knees pressed to the sides of the horse, and your toes in and heels out; then you will always be on the alert for a shy or a sheer, and he can not throw you provided you carry your hands close to his neck so as to grab the mane if necessary.

TO LEARN A HORSE TO LIE DOWN.

This he will often do the first time he is curbed, after he is well bitted and learned to follow you. Have a padded surcingle with a small ring in the back of it, then fasten the end of a small cord to the bit about twenty feet in length, and let the horse play around you, keeping hold of the other end of the cord. After learning him to play around you in changeful curves, right and left, bring him to you by means of the cord, and give him some of the sugar and powder to eat from the hand again (for tasting is one of the animal senses and must be gratified to gain the good will, &c.), then let him run around again, and by cracking the whip in his face as a signal, he will soon learn to stop running, or come to you without the aid of cord, to taste something he likes; and all this at the crack of the whip. Now if you wish him to lie down, be gentle with him; and while you are patting and caressing him, place some of the oils in his nostrils, or on his tongue, or you may let him snuff chloroform from your handkerchief while you are brushing his nose (without being noticed if you choose). At the

same time run the cord from the bit through the ring in the surcingle, keeping hold of the other end, and start him off at a slow place, pulling gently on the cord till he comes round to you, and his nose is turned round near the ring, holding it there firmly with one hand and a switch in the other. Now command him in a clear and distinct tone to lie down, repeating the command and switching the fore legs until you are obeyed. By repeating this operation several times, he will learn to lie down by commanding him, or even by any given signal to do so. When he lies down, you can loosen the cord and keep him down by placing your foot on his neck. He is now your pupil and friend, and can be taught to understand and do almost anything you choose to learn him. Few horses, after being dealt with in this manner, will ever require anything else but kind treatment afterwards to always be kind and obedient in any spot you may place them.

We sometimes meet with vicious horses (as it were) or those that have been ill-treated by their owners, until they are afraid of almost every thing they see, and will balk even at the sight of the whip. To render them kind and safe for family use, or learn them to perform any of the feats they are capable of doing in the circus or menagerie, or to fit them for the parade or battle-field, is certainly a very desirable object. They should not be afraid of anything, but be taught to love and obey their masters, notwithstanding what may be going on around them. This can be accomplished only by kind treatment or a strict observance of the foregoing directions. To cure a horse of scaring at the sight of a lady's parasol,

or anything that you can take in your hand—after placing some of the powder and oil of cummin on the nose—go up to him (talking in rather an undertone of voice) with the article in your hand, not shaking it to try to frighten him, but let him first smell of it; this he likes, for he smells nothing only what you rubbed on his nose, which he takes to be the object you hold in your hand; then carry it around, hold it over him, let him view it, and his fear will vanish. If he is afraid of a carriage top or anything that you can not well carry to him, the process will be the same; only you must lead or drive him to it, and not be hasty about urging him to approach the object of his fright, but give him time to view it and satisfy himself that it is nothing to hurt him. When he obeys your command in doing this (or anything), commend him by patting him on the neck, or giving him something to taste he loves. This inspires him with confidence and friendship which he remembers, and he will approach any object you wish him to fearlessly.

The horse, unlike other animals, breathes only through the nostrils; hence we see the distended nostril while he is in the act of running or hard breathing from whatever cause. So when the object is only to have him smell the medicine, place it on or in the nose. But when you wish it to have a little more subduing influence over the animal propensities, place it on the tongue.

You may learn a horse to stand anywhere without hitching, by riding or driving him to where you can stop and leave him so he does not see you, and yet where you can lay your hand on the reins the moment he attempts to start, going to him often; and when he does

not start, give him something he loves to taste; pat and caress him; but you can not learn him to stand without hitching, by whipping him for starting. If you wish not to have your horse afraid of the report of a gun, or the noise of a drum, rub the oil of cummin on the nose so he will not smell the powder, and place about six or eight drops of the oil of rhodium on the tongue. Then commence drumming or firing near him, very lightly at first, occasionally giving him a little sugar or anything he likes to eat. You may increase the noise by degrees until he becomes so familiar with it that he will not care anything about the noise of a drum or gun at any time or place.

It would be almost impossible for one man to point out all the niceties necessary to be observed in the education and training of the horse, even if he understood them; but if I were going to learn one the A B C, I would not try to teach him botany or algebra at the same time, for this would only confuse and overtax his memory. I would begin first by learning him thoroughly to understand some simple thing that he could easily comprehend and remember, before I commenced with another. Then take up another branch, and so on; for it is not so difficult to climb in this way, that we need to turn from the bramble and say sour grapes. Be not hasty, and you will accomplish more in a given time. When you are trying to learn him anything, watch his eye and ear carefully, for by the motion of these you will be able to perceive whether he is inclined to do as you bid him or not; for it is only when he is in a playful mood that you need attempt to make an impression towards the

advancement of his education. If he is not inclined to obey you at first, wait patiently until he is; do not urge him too much at first; keep your eye on his, as he ever will on you; then you will discover by the motion of the ear and the expression of the eye when he is willing to mind you. Then show him whatever you wish him to do, by motions, or by pushing him to do it, or even in some cases do it yourself, and then make him do the same; for the horse is often known to imitate his master when thus inclined to mind. The word should always be distinctly given to suit every effort made to have him learn to do anything, whether there is to be any coercion used or not; and whenever he does the least thing as you tell him to, you should pat and give him a taste of anything he has learned to like, as an expression of delight in being obeyed. In this way his memory enables him, as he becomes familiar with his master's voice and words, to be taught almost anything he chooses to learn him, that his cultivated intellect is capable of acquiring. You can learn him to understand what you say to him; and you can learn him to perform any little trick you please, by the slightest motion of the hand, foot or whip, or even by the motion of your own eye, telling him in this way what you wish him to do, after he has become familiar with the signal, by its being accompanied with the word. Such is the keen perception of this animal. When a horse has been well broke in this manner, or by kind treatment, he will always be safer to drive and handle than one broke in the usual manner (or not at all, as a great many are), and he will remain so through life, or at least in the hands of a kind master;

for he has been trained and educated, and is more tame and obedient, consequently his value is greater.

When you have a horse that is bad to handle with the bridle, and apt to pull too hard for you, have a slip rein and let it run over the top of his head instead of the jaw, and you will have no difficulty in managing him; though I have seen them so well broke that they did not need any bridle on at all, but would obey the word, and yet they would come out of the stable like tigers in respect to courage.

Can the horse be charmed? I say he can.

“ Like the tone of the gun,
That startles the deep, when the combat's begun,”
I've had my horse take fright and run,
When others might think they were undone.

But I whistled and laughed quite merrily when it would have the effect of stopping him (almost without the use of the reins) before going ten rods. I do not say that every one can do this; some are gifted more than others. But any one can do a great deal towards driving away fear at such times, which is always so disastrous, for man has the power of mind and capacity given him, necessary to control and govern the horse under almost every circumstance, when he learns how to apply it to this purpose. You can, to say the least, instead of hallowing and screaming, or jumping overboard, if you speak at all do it mildly, and in rather an under tone of voice with the help of the reins.

And you will be most likely to calm his fear,
And rejoice when you check him in his mad career.

Now, by following these directions, and always show-

ing yourself kind to the horse, you will be able to learn him anything that he is capable of performing, and he will not be afraid of everything he sees, but will obey your commands. For this reason it inspires him with confidence, and he takes you to be his friend. Such is the efficacy of this mode of treatment, with or without medicating; it creates a friendly feeling towards you at the time by subduing the animal propensities of his nature, and then by kind treatment afterwards, you can keep up this feeling. Thus you are lord and master, and have dominion over him, though some may doubt the authenticity of this remark; but notwithstanding the lapse of ages and the progress of our race, man, with all his wisdom, has not been able to pen a more truthful one since this was done. in this respect.

This rule is more particularly applicable to the high spirited or intelligent horse. When he will not go without the whip, he can seldom be made to go with it.* He can and should be made to feel the bit, and obey the motion of the rein and whip, which he can be made to fear to a certain degree sufficient for this purpose, without blunting the edge of his better feelings.† Now, ride fearlessly and as merry as you please with the reins in

* And when he is, he generally has to be broke every time he is harnessed.

† Draw a taut rein, a gentle pressure increases the speed of the walker; a sudden roll of the hand (that holds the reins) so as to draw one and slack the other, is a signal to trot; and both alternately the gallop. Either the slack rein or word will notify him when he is to stop.

one hand and a good whip in the other, fearing nothing except a mean act.

It is hoped that those who may chance to read this for the purpose of gaining knowledge, may be benefited by its perusal. They can melt the contents thereof in the mind's crucible, giving me credit only for what is left after taking out the dross. But those who read it with no other motive than that of fault-finding, can keep their rods in pickle, and have the lasso in readiness, until they think they are able to profit by their use. Reader, will you please to excuse me for making these side remarks, for I get almost angry at myself sometimes, because I can not do any better.

CHAPTER XXVIII.

ON THE SUBJUGATION OF THE HORSE WITHOUT MEDICATION.

The foregoing is a very humane system of treating the horse, and one that is attended with the best success in subjugating all horses for domestic purposes; and yet there is another method by which they may be trained and subjugated, that no less shows the superiority of man than the willingness of the horse to obey him, when our wishes are made known to him; without medication. The domesticated horse seldom needs anything more than kind treatment at our hands to render him obedient to our commands, after he has learned what we desire of him, for his instinct leads him to love and obey man. Although the horse, not unlike other animals in

this respect, is possessed of a kind of wild fear of man (in a natural state), that must be overcome before we can successfully proceed to learn him anything else. This the Mexicans, as well as the Indians, accomplish in their way with the lasso, in catching them wild, by decoying and riding up to a herd of them, and throwing it over the head of one (around the neck of the animal), and then follow him in the chase until he is choked down. After this he is not hurt, but caressed and talked to, when he is hampered and led to the camp without further trouble, where he soon learns to love and obey his master.

“ Make my breast,
Transparent as pure crystal, that the world jealous
Of me may see the foulest thought my heart
Doth hold.”

Some thirty years ago, while experimenting with a balky horse that had refused to pull, having some distance to travel, and night being near, after other means (that we were then acquainted with) had failed to make him pull, as trying to lead him by holding a handful of oats or hay before his nose, getting on his back and trying to ride him, whistling, changing drivers, and whipping, &c., for these things had sometimes caused him to pull, but being of no use to us now, I availed myself of the expedient of taking a large rope halter, giving it a slip noose round his neck, and then hitched another team to the other end of the rope, by which means he was drawn some twenty rods. Some of the way he was on his feet and the remainder on his side; after which he pulled well for a long time. And whenever he refused to pull

after this, all that was necessary to make him obey the word, was to place a rope or strap around his neck and choke him a few minutes. By this I learned that choking had a subduing influence over the most obstinate of horses, and which I occasionally resorted to. A friend, where we stopped over night, requested me to tell him how I managed to make that horse work so well (for he was an old offender), and I told him the process made use of on this occasion. About a year after this I again met this friend, when he threatened to give me a flogging, for, said he, I had a noble horse, only once in a while he would balk so I could do nothing with him, so I just put a chain around his neck, and hitched my oxen to it and draws him only just a little ways, and Ise broke his neck—Ise did! This circumstance made me a little cautious about recommending this mode of subduing the horse, and also led me to study the nature and disposition of him more carefully, for I thought if he could be subdued in this way, there must be a nobler and better way for man to accomplish it. Therefore, on the discovery (to me) of such an one, I abandoned the former, as cruel and barbarous, more than twenty years ago.

Now I do not expect to be fortunate enough to make myself renowned in relating my experience or observation of the horse in this respect; but I trust, mainly on the merits of this subject, to become useful to those who feel an interest in this important topic. Firstly, the horse is governed and receives his instruction through the five senses, viz: seeing, tasting, hearing, smelling, and feeling; the one of seeing seems to rather predominate, but the most of these are more acute than even man's,

for they partially supply the place of reason in the animal. Secondly, he is governed (like all other animals) by his instinct, which is combined in the five senses; and one of the qualities of his instinct is to fear the approach of man, whom he looks upon as his superior. This is more especially the case when he is in a wild state; but when this wild fear is changed to love by kind treatment, it is increased an hundred fold. Another of these is to love and obey man when domesticated and educated, which he generally does unless his animal propensities are aroused by ill-treatment; for it is an undisputed principle in the nature of this animal not to offer resistance to our wishes, when made known to him in a manner that he can understand us; and of course it follows that this must be done in accordance with the laws of his nature.

As an evidence of my position here, allow me to digress a little from the subject in question in order to illustrate my views of this instinct. All created beings have a share of this after their kind, and in their own peculiar manner, according to their respective grades and circumstances. For instance, look at the chicken; see him hide and skulk away (at first sight) from his deadly foe, the hawk, as he approaches him; and how soon he yields when once clasped in the talons of his masterly power. He appears to be sensible of his inferiority to the hawk; and so it is with the smallest insect that crawls on the earth; they all appear to be acquainted with each other's habits and propensities up through the whole chain of created beings. Speaking of this chain, as some may doubt the theory, reminds me of what the phi-

losopher Wyllys truthfully says in regard to it: that if there was a link wanting, the ends thereof surely lap by far enough to tie, and that some of the lower order of the human species run below some of the higher grades of animals, as to their reasoning faculties, there can be but little doubt. And as another evidence of what I have stated above, you will permit me to relate the story of the spider and the snake, as told by the Hon. A. B. Dickinson, which I will give in his own words. "I will not attempt," he says, "to say where instinct leaves off or knowledge begins, but, perhaps, I may as well, by way of illustration, tell a story, though most of you have undoubtedly heard it, and many were witnesses to this wonderful sagacity on the part of the spider in stringing a snake up by the neck. The great thing in the whole affair was in putting the web over the mouth of the snake, which was done with as much skill as a first class mechanic could have muzzled a dog to prevent his biting. This web was secured around the snake's neck, and then hoisting was commenced at the rate of one-quarter of an inch in twenty-four hours, by thickening and twisting up the web.

The snake was first discovered by a merchant, under his counter, where he had undoubtedly been carried with saw dust, which had been put in several weeks previous to prevent mud from being tracked about the store. When the reptile was first discovered by the merchant he took a club to kill it, but he observed that it seemed to be fast without seeing what held it, the web being too small to be seen by the naked eye. After he became satisfied through a magnifying glass that the creature was fast-

ened, he next discovered that the web was around its neck, and fastened to the under part of the shelf. They were watched closely day by day until the snake died; the spider had raised the head of the snake from the floor slowly but surely each day, and when that work was finished, he commenced biting the snake about the head, sufficiently to draw the blood, which could be seen with a glass. Each time the snake was speared he would spring and jump so as to stretch the web several inches.* I traveled fifty-two miles and made two journeys to see this most wonderful performance. What a lesson is taught us here of the sagacity and ingenuity of a little spider conquering the reptile of many hundred times its own bulk. Let it therefore admonish us what the mind of man is destined to accomplish, and what it must do to equal the knowledge of this little insect."

Man is not only placed at one end of this great chain, but he forms the hook that hangs it up on the throne of Jehovah, and the swivel and pivot also upon which the whole turns; and it extends from thence to the—yes, beyond the surface to the very centre of the earth and the bottomless deep; and, notwithstanding its crooks and nooks, and all its mysterious windings, there is a current of electric life running through the whole length thereof that proceeds from the great battery from which all knowledge and instinct flows.

Nor does the mind find a place of rest here. Botanists tell us that plants have lungs, and nervous systems. We

* The horse, too, lives in fear of the snake; you can not ride him on to one of them, he will either side off, back away, or jump over them if possible.

know they have the means of circulating their fluids, and they may have the sense of feeling as well. Now look at the little so called sensitive plant, and behold the grandeur, the sublimity and the wisdom of the great Architect of the Universe. One that loves to dwell on this theme may follow the chain down until he finds some animals that are nearly plants; then turn to the lovely and beautiful plants and flowers, and he can almost see animals in them; or, at least, he can see the arteries through which the circulating fluid flows from its mother earth to the notched and spiral leaves of the smallest plant, and the veins also by which it is returned from whence it came, which is the heart of the vegetable kingdom as much as the heart of animals is the fountain head of the circulating fluid.

Do not think that I am going to do by you as the man did who bought several gallons to treat the crowd with, and then kept it all to himself; I will talk about the horse directly.

Man stands at the head of all created beings, for all will tremble and crouch with fear at his approach, except when congregated in numbers, or driven by hunger, or when attacked in a warlike manner, or when there is no chance to flee. Then if man is placed at the head of all these, it shows the importance of his studying his own nature, and if he arrives at the highest state of his moral culture to which he is attainable, all the better, so as not to abuse the power invested in him, and enable him to turn all these things to the best and most profitable account. What then has man to fear from the brute creation when he becomes acquainted with his ability to govern

and control them all, and when he sees the most ferocious beasts flee at his approach? As I stated above, the domesticated horse loves man, and I very much doubt whether there is another creature on earth that is so universally beloved by man as the horse. They look upon him as their friend, and when in trouble will run to him for help and protection. As an evidence of this fact I need only relate one circumstance that I witnessed with my friend and neighbor, Casler, and others. I had a mare that owned a colt about a week old running in a field wherein was an old well fourteen feet deep, which had been covered with plank, which by some means had got off, so that the colt fell into the well. This happened about the break of day, and before I had got out of bed I heard the noise and clatter of a horse's hoofs which awoke me. This was followed by a loud neigh of a horse at my door. I scrambled out of bed and went to the door just in time to see the old mare returning towards the well that was some forty rods distant. Seeing her look down into the well and then start for the house again, I anticipated the trouble she was in. I summoned help and started for the well, but not without being met several times by the old mare (who seemed to be almost frantic) as if to hurry us on to the place of disaster. When we arrived, the colt was splashing in the water at the bottom. We immediately got him out with the help of ropes that we took along with us, when they both followed us back to the house; and whenever we stopped, the mare would stand by us, and even lick our hands, as well as the colt, in thankfulness for the assistance we had rendered her in rescuing her colt.

But to return more direct to the subject in question, I will proceed to show what man should be to accomplish his purpose with the horse, and then by what means he can do it. The timidity* of many persons only prevents their becoming successful horse tamers fully equal to the great Dampteurs of the present day. It requires almost a reckless courage, a patience that never tires, and a temper that nothing can ruffle. With these requisites, any one may enter the pleasing labor of subjugating and educating the horse with almost a certainty of success. All men are not endowed with this gift; though any one of common ability who studies the horse minutely, will soon learn by his quick perception and judgment to govern the horse, notwithstanding the great difference of organization and temperament that belongs to this animal, which does not always consist in a uniform plan of operating withall, but must be varied according to their individual capabilities after subdung their wild fear. This is a study which, if pursued systematically, will be one of the most ennobling, as well as profitable branches of the industry of breeders and the farmer's occupation, for it will enhance their horse's value at least one-half (in some cases) by rendering them more docile and safe to guide and handle. In a word, the man should be in every respect of good disposition, and the law of kindness should be fixed in his mind as the keystone of all successful theories of treatment towards the horse. And he should look for help only where it is to be found.

* I might refer here to the daring feats accomplished by M. Blondin, and others, to show what man is capable of arriving at when destitute of fear.

This is what preserved Daniel in the lion's den, and is what may save many people the great trouble they meet with in endeavoring to manage the horse.

How it is done.—The horse is to be taken into a room or close stable, so that his attention may not be attracted by surrounding objects. Then the man, after placing a halter or bridle on him to hold him by, with his powerful, mental and physical organization, and indomitable will, proceeds to gaze directly in the eye of the horse, which will most assuredly be met by that of the animal. After standing in this position a few moments, the man gently passes his hand over the vertebræ and temples of the horse; this quiets and soothes the nerves of the head, whatever the propensities of the animal may be, being careful not to relinquish his gaze at any time while he is thus caressing him. If the horse is too vicious for a person to stand with safety before him, he can have a partition between them for his safety. There is a certain tone of voice also to be used, which should be modulated according to the temperament of the animal, so as to further the ends sought after. Two lessons a day, say from ten to fifteen minutes at a time, are sufficient; and the worst of horses will generally yield to the supremacy of the man after two or three days' trial, and become perfectly docile and obedient. You may call this magnetism or what you please. "The light of the body is the eye, if, therefore, thine eye be single, thy whole body shall be full of light," Matthew, vi, 22. There is still another way which expediency sometimes calls for, viz: After proceeding as stated above, whether your horse is in harness or not, if he does not yield, pass the left hand

over the face, and let it drop suddenly and seize him by the nose, pinching it so close he can not breath, at the same time grasping the left ear in your right hand firmly, not losing sight of his eye.

“ Nor let a wave of trouble roll,
Across your fearless breast,”
Lest all should be lost but soul,
And success will crown the rest.

Now you hold his five senses (as it were) within your grasp, which are all the same both in the most haggard and mean-looking horse that draws a coal cart, and in the fiery steed; although they may have been blunted by hard fare and ill-usage in the one, and cultivated by kind treatment and skill in the other. The nose is closed so that he does not breathe, consequently he does not smell, neither can he taste. You obstruct his hearing by holding on to the ear; he is made sensible now of the touch of feeling for he can not shake you off, but, like an Indian when his finger is in your mouth, he pulls steadily back after the first struggle, forgetting he has any other means of hurting you. Your eye is master of his, for he sees nothing in you now but the masterly courage and power you hold over him, which he readily submits to. This will cow the ugliest horse you ever saw; he is completely conquered now, and all you have to do is to teach him that you wish to be obeyed. This is all the coercion that need to be used to subdue the very worst of horses. To learn a colt to back well is sometimes the most difficult thing you have to learn him, which can be done effectually by following the above plan, having a second person behind him at the

same time to pull on the reins, though I would not resort to this until other means had failed.

To test this theory, let two men (for instance) look steadily and direct into each other's eyes, with the full determination of each to outlook the other; the one or the other must soon give out yielding to the power of the other. And so it is with the horse; he is mentally weaker than man and must yield to his superiority when once brought in contact with the strong battery of his mental power, for this is a sort of mental war between the horse and his master, which may depend in a greater or less degree on the physical strength that accompanies it. This war, too, may be considered all the harder for man to fight on account of the energies of the animal, the whole river of life being used to carry his own mill. But when we have all the energies attributable to the animal, and the gift of reason besides to help guide and direct, then there must be a misapplication if we are not the victors. If there is any doubt remaining with any one whether the horse knows the difference between good and ill-treatment, you spit on his nose and see how quick he will resent it, by throwing up his head and leering, as much as to say, you may get bit, or I will send my heels at you, if you repeat the insult. And see that he does not remind you of it the next time he has an opportunity. He loves you because you first loved him. When and wherever this principle is rightly understood, the business of going around the country and obtaining from five to ten dollars a piece from the boys for learning them how to choke horses, will be at an end as it should be, for I have seen several valuable horses

very much injured in this way; and all that pretend to know anything about the nature of the horse, will consent that the law of kindness is the true principle to be adopted in the subjugation and culture of the animal.* Why then resort to the most barbarous cruelty that can be inflicted on him to commence what some call the art of taming?

HARNESSING.

The manner in which a colt is to be first harnessed is of some importance, and should be done with care. In the first place, he should be made familiar with the harness or saddle, by letting him smell and touch it with his nose, as well as to see it; then carry it around him and rub it against him until he becomes satisfied that it is nothing that will hurt him before you attempt to throw it on him, which should be carefully done so as not to scare him with it. The harness once being on him, it should be firmly buckled, but not too tight; the collar should be a good fit; you may then proceed to pull on the traces, bidding him to pull also, and practice him in this way until he finds out he is able to draw you around the barn or yard. Then you may hitch him to a wagon or light load at first, and every day increase the load (never loading him so that he can not draw the load easily) until his breast gets hardened so that he can

* The peculiar instinct of the horse, accounts for his being subdued in so many different ways, by those that did not understand this principle—but they do not lay him at their feet at once without coercion or drugging, which is done so dexterously as not to be detected by those present.

draw without hurting him. The colt seldom refuses to pull the first time he is harnessed; but by overloading to see how much he can draw when his breast is tender, he bruises it with the collar by drawing too hard, making it sore, so that the second or third time you harness him, he refuses to pull because it hurts him to do so, and then he flinches and flies back; then, according to the old method of treatment, he must be flogged into it or he will be balky; and nine to one if he does not form habits in this way that he never forgets, and especially when he happens to be placed in like circumstances.

There is more truth than poetry in the philosopher's remark, that a colt was never broken only on one side at a time. For you may first break him to have the harness laid on from the near or left side without fear (as we generally do), but if you approach him with it on the off or right side, he is as shy of it as though he had never been harnessed. For this reason people have sometimes been greatly disappointed in trying to catch their horse in the pasture by going up to him on the wrong side, and when they thought they had their hand almost on him, why, he was gone, and then comes the chase. Then you break a horse to step into the thills from the near side to your liking, and he knows nothing about going in from the off side. And so it is in learning him to take his place on either side of the pole, or another horse; and he is as awkward when you wish him to change sides as though he had never seen either. Therefore, in breaking a horse, he should be used to having the harness placed over him from either side, and be learned to take his place on either side of the pole,

or another horse, by first leading him to his place, and, at the same time, telling him in plain words, as right or left, what to do, and he soon becomes so familiar with the words that he is ready to obey them. Afterwards his eye will tell him to do what his ear learned him before. In the same manner the ring master is enabled to change the routine of performance in the ring by the use of words, which is no new thing in the nature of the horse if men have just learned that he is capable of distinguishing sounds. Consequently we see the necessity of educating the horse with a knowledge of his nature, for he can not in truth be said to be thoroughly broken until he is broken on both sides.

BLINDERS, OR BLINKERS,

As a general thing, I think had better be dispensed with, though there are some arguments in favor of their use, as well as against them. They may afford some protection to the eye when a horse is driven in severe storms, for when he is at liberty he is always seen to shield the eye from the pelting storms, by turning his rump in that direction from which it beats the hardest; and when the rays of a hot sun are too oppressive for the eye, he is frequently seen to hold the head in the shade of his own body. And then a very lazy horse, or one of poor memory, is generally freer to go and mind when driven with blinders on, than he is without. For this reason he is more apt to be afraid of the word and whip, which is prejudicial to the better horse. The noble spirited and well educated horse should have the free use of the eye; and he will not unfrequently shun dangers

that would not be seen by man in time to avoid them; therefore such a horse is safer when driven without blinds than with.

As we are all liable to err, I doubt not but that I have committed some errors in this work that may appear to the more polished minds of some, but what I ask of such is to place them all in the dark back ground, and view them as we should view the great contrasts there are in human life, and then see if they can not discover some bright spots in the picture I have drawn, standing out in bold relief that are pleasing, profitable and useful for man to possess.

P A R T I I .

PHARMACOPŒA.

In giving medicine, much must necessarily depend on the judgment of the one administering it—as to quantity, and the time of giving, &c.; for it would be impossible to lay down rules that would be adapted to all cases. So it often happens that you should vary the quantity, and time of giving, according to the strength of the animal and the severity of the case; but I will endeavor to do what I can to assist you in this respect, first saying, that where you find the quantity given, it may be considered as a medium dose.

I will say one thing more, that is, after giving any kind of medicine, wait a sufficient time to see the operation thereof, before trying anything else, otherwise the one might counteract the other, or act in conjunction with it, and thereby lessen the strength of the patient beyond what would be necessary. Therefore, it is best not to be hasty in matters of this kind.

A tablespoonfull is supposed to be equal to half an ounce, or four drachms, yet many of the modern spoons

will contain five drachms; a teaspoonfull will equal about seventy drops, a drop will contain a quantity proportioned to the size of the vial from which it falls, a common ounce vial is a medium size; one-third of a teaspoonfull will be one scruple, or twenty grains in weight. What would be a dose for a man, may be increased as much as the food of the horse exceeds that of man, in many cases. Better give too little than too much.

By *decoction*, I mean the boiling of herbs or other substances, and where a large quantity of water is required for this purpose, after boiling a sufficient time to obtain the strength thereof; strain and boil down if the object is to use it as a salve—though long continued boiling is liable to lessen the active matter therein contained, if used as a wash.

By *teas* and *infusions*, I mean simply the steeping of articles in hot water—not boiling them.

Tinctures are made by imbuing the articles, or substance, in alcohol, from seven to fourteen days.

Volatile Oils are made by throwing a sufficient quantity of water on the substance to be acted upon, so as to prevent the volatile spirit from flying off during distillation. After maceration for a proper length of time, distil, and separate the oil from the water; as it may be lighter than the water and swim on the surface, or heavier and sink to the bottom. So, according to this method, the oils of anise, wormwood, peppermint, organum, rosemary and sassafras are prepared. And then by adding a sufficient quantity of alcohol, to cut the oil, we have the essence.

Now, let us talk about the horse a little. Everything that is digested in the stomach, goes to help form blood; anything that is not digested, acts more directly on the kidneys and urine, or passes off with the evacuations of the bowels, or through the pores of the skin; for these are the principal outlets of all food and medicine taken into the bowels, except what is absorbed in the growth and support of nature. Hence those oils, balsams, and articles used for urinary difficulties, are among the things not so easily digested.

When the horse is (or appears) quite sick—if his appetite is not much impaired, his bowels move regularly and healthy, he urinates well, and his skin feels soft and looks glossy—he can not be seriously ill, except from some local difficulty, and this can not be of long continuance without affecting some of the above named functions. Some people talk a great deal about doctoring the blood, but if a horse is ill in any way, these things should be first looked into; and, when properly attended to, the blood will take care of itself, and other things will be found of minor importance. If a horse is diseased, treat him accordingly, but do not (because you have learned how to treat a few complaints) be continually dosing him with medicine that he does not need, and the effect of which you do not know on the system.

The *Thorax* is that part of the body from the mouth (or throat rather), quite back to the midriff or diaphragm, containing the heart and lungs. That part back of the midriff is called *abdomen*; containing the intestinal

canal, &c. The upper part of the wind-pipe is called the *larynx*; the lower part, the *trachea*.

Acute, and sometimes chronic, or slow lingering inflammation of the larynx, takes place; it is generally brought on by hard colds, though sometimes it is caused by eating too early mown or dusty hay, the pollen from the flowers of which consists of a very fine flour, very irritative to this part of the thorax, which is particularly sensitive. This difficulty is frequently taken by many for lung fever, the heaves, &c.; but is unlike either, except in difficult breathing, as drawing in of the sides with a long breath. It is attended with some fever, quick pulse and costiveness; the breathing becomes more and more difficult, and, unless relief is found, the horse dies from actual suffocation. This disease will warrant heavy bleeding, and treat as you would for distempers, with a free use of the condition powders No. 1, herein-after mentioned.

Death beginning at the Lungs.—As in suffocation, the circulation and the organic functions cease; the animal is said to be alive so long as any of the organic functions are going on. The heart continues to act after respiration has ceased; the ventricle of the heart continues to propel the blood to all^{*} parts of the body, but the blood is now incapable of supporting life, and a few waves to the brain destroys its functions, and the blood from want of æration in the lungs, destroys the action of the heart itself, and every part through which it circulates; but at what particular time they become insensible to pain, must for all time to come remain unknown.

Death beginning at the Brain.—"In this the functions of the brain (voluntary motion) cease first; respiration next fails. Sudden deaths, beginning at the brain, occur in the case of severe injury to the head, epileptic fits (blind staggers), and the taking of narcotics and other poisons."

Death beginning at the Heart.—"Here the order is reversed, the pulsations of the heart are first stopped, and as the brain is not supplied with the stimulus of blood, voluntary motion gradually fails. Breathing, in this case, is the last act of life. Sudden deaths beginning at the heart, occur from poison, diseases affecting the heart, &c."

Death by causes acting upon the system generally.—"Hemorrhage produces death by its effects upon the whole system, and not by its suddenly checking the heart's action; for the heart continues to act after all supply to it is cut off. In death from arsenic, lightning, and by compressions made on the brain and spinal marrow, vitality in all the animal economy ceases at once."

POISONS.

May enter the body in different ways—with the food, through the anus by clysters, through the nostrils and lungs with the air, through the absorbents of the skin, either whole, ulcerated, cut or torn. Poisoned wounds may be made by the stings of bees, wasps, hornets, and the bite of animals, as dogs, snakes, &c.

Antidotes for Poisons.—Stings are to be treated by the application of cold water, clay and vinegar, and opodel-

doc. If there is much swelling, bleeding and a dose of salts will be useful. For bites of animals, apply to the wound a poultice of pumiced onions, or quick lime and oil; after which dress with the fresh juice of the common plaintain. Where mineral poisons has been taken into the stomach, give (as soon as possible) freely of lime water, this sheathes the stomach against its action on it, then give honey, chalk, or sugar in water, with a view to dilute the poison if possible—but do not give physic immediately, for it will carry the whole poison into the bowels and certainly produce death. Camphor is an antidote for strychnine. When any of the alkalies have been taken in sufficient quantities to prove disastrous, vinegar is the proper antidote; it must be given in large quantities, it neutralizes the alkali. When any of the strong acids have been taken, the reverse of the above is the treatment to be used. But if the animal should be troubled with very difficult breathing and irregular pulse, give often of calcined magnesia in water, if this is not to be had, give soft soap, soda, or chalk in water.

Condition Powder No. 1.—The superfine flour of slippery elm bark (*ulmas fulva*) is what I use as the basis of these powders; this of itself is good in most diseases and harmless in health, viz: it is good in fevers, and in inflammations of all kinds. It lubricates the urinary passages in difficulties of that kind. It is good in cases of colds and coughs, by loosening the phlegm, and allaying inflammation in the larynx and trachea; it also acts as a diaphoretic. To one pound of the above, add nearly one-fourth of flour of sulphur; it is by a con-

tinued use of the sulphur, in small doses, that its benefit is derived; this may be sweetened with pulverized sugar and scented with anise, to render it more pleasant and palatable; then a little mustard, ginger, or cayenne may be added, to whet the appetite, &c. Dose, a table-spoonfull once a day, except in urgent cases twice a day. And you may add to these powders, any other ingredient that you think will be beneficial, according to the condition of the animal. You will find them to answer a much better purpose than those you buy at the shops, and will not cost you half as much.

Heave Powders.—May be made the same as the condition powders, by only adding one-fourth as much as you do of the sulphur of pulverized lobelia seed (*inflata*), the dose to be divided and given morning and evening; or what will be still better, is to work it up into a ball, with honey or balsam of fir, and give it in that way. This, with frequent drinks, made by infusing the Irish moss in water and sweetened with loaf sugar, will be attended with the best success in heaves. This is an excellent drink in all kinds of coughs, &c.

Tobacco, is a cathartic, diuretic, narcotic, and antispasmodic. Five or six large spoonsfull of strong infusion of tobacco, mixed with a quart of gruel, and used as an injection, will afford relief in violent colics—sometimes when the bowels can not be moved by any other physic. The smoke of this weed is also very good for a like purpose, by being injected, and also for dispelling wind, &c.

A Salve, made by boiling the inner bark of the dog

acne, and the bark of the bittersweet root (*Dulcamaræ*) together; after boiling sufficiently, strain, and simmer down with hog's lard. It is a very soothing and healing salve for wounds or bruises, made by kicks, &c.; and when the wound is much swollen or inflamed, the infusion of tobacco may be added to advantage.

By *Diuretics* are meant those medicines which increase the discharge of urine; for this purpose spirits of nitre may be given, from half to one ounce for a dose, for once or twice, but when continued it is liable to produce inflammation of the urinary organs. Broom corn tops or seed, boiled in water, and given freely, prove an excellent diuretic; and also boughs or balsam of fir.

Diuretic or Urine Balls—Are made as follows: hard soap, common turpentine, balsam of fir, each four drachms, oil of juniper, twenty drops, powdered rosin to form a ball. For dropsy or water-farcy, add to the above allspice and ginger, each two drachms; make four balls, and give one morning and evening until it has the desired effect.

Diaphoretics—Are those medicines that increase the natural exhalation by the skin; that is, they produce perspiration or sweating. Thoroughwort (*Eupatorium perfoliatum*), boneset, crosswort, thoroughstem or Indian sage, hemlock, sassafras, ginger, and cayenne pepper, with many other things act as a diaphoretic.

Expectorants.—These are medicines which facilitate the rejection of mucus, phlegm, or other fluids, from the throat, trachea and lungs. For this purpose the following will be found beneficial, viz: the slippery elm tea, which may be made by throwing two tablespoonsfull of

the flour into one quart of water, and sweeten with molasses; stir well and it will form a thick jelly. The Irish moss, also prepared in a similar manner, the onion juice, which can be obtained by boiling them in pot liquor, or by frying them in goose oil, are good to loosen the phlegm and help a cough. Sweating the head and throat is also useful in loosening the phlegm, and creating a discharge at the nostrils, in severe colds, &c., for which the black sheep's wool is excellent to bind on the head and neck; then steam the head over scalding hot bran, or by turning vinegar on a hot stone under the nose. The black wool is thought to be preferable to any other for this purpose.

Anthelmintics—Are remedies that expel worms from the intestines. *Alum* is the only thing necessary to be used for this purpose, with the horse. When this is not to be obtained, tobacco may be used sparingly in lieu thereof, with plenty of sage tea.

Refrigerents—Are to cool and diminish the force of circulation, and reduce the heat of the body without diminution of vital energy. Lemon juice, diluted with water, with or without being sweetened (lemonade), in the hot stages of fever is very good; and a tea made by infusing the bee balm may be used profitably, and also spearmint; but when a horse has been overheated, by being driven too hard, give him something to increase the inward heat, and rub him with a brush until he is quite dry.

Demulcents—Are used to prevent acrid matter from acting on the sensible parts. Flax seed, by infusion, yields a large quantity of mucilage, and is in common

use given internally, or in the form of poultices for sores, &c.; but for an outward application of this kind, the poultice made of charcoal and yeast is to be preferred. The marsh mallow, liquorice root, or ball, arrow-root, or herb, also yield mucilage, and are good in cases of catarrh or purging, and in fevers, &c.; prepared by infusion.

Lithontriptics—Are supposed to have the power of dissolving urinary calculi (gravel or stone in the bladder or intestines); for this you may slice the common red beet into old cider, and after letting it stand a week, give a pint twice a day. This will dissolve a stone that has been taken out, and has been given with the best of results; as much of its active matter must necessarily be absorbed by giving it, before it reaches the bladder, why not inject it through a hollow bougie into the bladder occasionally, that it might prove more successful. But if I had a horse in this dreadful situation, I would first obtain a bottle of Tilden & Co.'s (N. Y.) Fluid Extract of Hydrangia (Arborescens), and divide into six doses, and give two or three a day, and wait the result. I know it has done wonders for the human in this respect, and I know of no good reason why it would not for the horse under like circumstances. Some might despair of ever trying to relieve the horse in this critical situation, but they should know that this calculi is oftener found in the intestines of the horse than anywhere else.

Preventive of Calculi.—The greatest we can use for this difficulty is to keep the digestive organs in a healthy state; for these calculi are found to contain phosphate of lime and other substances which are contained in their

food, and which, when properly digested, go to the support and growth of bone, but when not thoroughly digested go into the urinary organs, and there form gravel and stone. Hence we see the evil consequences arising from too strong or oft repeated diuretics, which excite those organs so as to secrete an undue amount of the fluids that would otherwise go to help form the blood and bone of the animal.

Erhines—Are substances which occasion a discharge at the nostrils. Any substance in fine powder blown up the nostril has this effect, and it is more or less in proportion to the stimulating nature of the substance used; they are sometimes used in colds and inflammation of the eye. &c. Snuff, cayenne and hartshorn are used for this purpose. *Alum*, burnt or dried, is used sometimes to destroy fungus (proud-flesh), and, when mixed with honey, it may be employed in taking off specks, or film from the eye, to advantage. *Onions*, halved and scraped under the nostril, are excellent to loosen, and create a discharge at the nose, in colds, catarrh, &c.

Tonics—Are understood to strengthen and invigorate the system.

Astringents—Are such substances as when applied to the animal body produce contraction and condensation in the soft parts, and thereby increase density and cohesion; that is, they pucker the parts to which they are applied. A decoction of the oak bark, and alum, hemlock, &c., are powerful astringents; catechu is also used for this purpose. But perhaps the most powerful one known to be used (as an outward application), is the tonic acid, which is to be first cut with alcohol, when it is fit for

use. This acid is obtained from several kinds of barks and vegetables.

Relaxing, is to reverse the order of astringents; that is, to loosen, stretch, or to become flabby. Tansy (*Tanacetum vulgare*), an infusion of this made and given in large doses, will relieve the animal of ague or lung fever, if given while the chill is on; boneset is also good for a like purpose. Skunk cabbage (*fætida*), and the wild turnip are expectorants, and anti-spasmodic; the seeds and roots are excellent in coughs and colic. But, as a powerful laxative, the tobacco stands high on the list, given inwardly or for an outward application, in the vegetable kingdom.

Spirits of Turpentine, applied externally, is a stimulant and irritant.

Egg Shells, scorched brown in an oven, then pulverized fine and worked into a ball with honey, and given to the horse, are good to restore or assist digestion, when these organs have been impaired by fever or other disease. When the horse has been nauseated, is faint and drooping from any cause, add to the above ball equal parts of camphor gum and hartshorn and give him, and he will revive with wonderful rapidity. The shells are to the horse what gravel is to the fowl; they assist digestion.

Goose oil and brandy, about equal parts, makes a good application for spavins, ringbones, callouses, &c.

Dog's oil is a very good application to limber up old stiff joints, and to heal bad wounds in the flesh.

The whites of four or five hen's eggs, beat up in a

gill of good brandy, and applied to weak knees will prove beneficial to them.

When you wish to scatter a swelling or tumor, take the yolks of hen's eggs, with an equal part of honey, beat them well together, thicken with wheat flour so as to form a thick paste, and bind it on the swollen parts.

A drench to increase the appetite and purify the system.—Take mustard, wild cherry bark and horse-radish, equal parts, with half the quantity of one of burdock root (Lappi), the whole to be soaked several days in old cider; then strain and give a pint of the cider at a time, every other day for a week, or as the case may require.

A good Liniment.—Take one pint of spirits of wine (or alcohol), add one ounce each of gum myrrh and gum camphor, and one ounce of the oil origanum, and to the above add half an ounce of sal ammoniac (which must first be pulverized and dissolved in water, as it is soluble only in water). This makes a very strengthening liniment, and a valuable one to keep in the stable.

Hot Drops.—Take one gallon of good brandy (or high wines), one pound of gum myrrh, well pulverized, two ounces of cayenne pepper, and an ounce of camphor gum. Put the whole in a stone jug, boil five minutes, by placing the jug, unstopped, in a kettle of boiling water, or let it stand five or six days in the jug without boiling, only shake it well every day, when it will be fit for use. This, given internally, is good for colds, or inflammation of any kind, as it prevents mortification taking place. Applied externally, is good for tetanus, sores and wounds of all kinds, and is an excellent remedy for swelled legs,

or paralysis, &c. Dose, from half to one gill at a time, in one pint of water.

Composition Powders for Colds, &c.—Take two pounds of bayberry root bark, one pound of ginger root, two ounces each of cayenne and cloves, all to be pounded fine and sifted. Give for a dose, two tablespoonsfull of this powder, in a pint of water, after letting it steep a few minutes, sweeten with sugar or molasses, as you like, give it every two hours. This will be effectual in raising the inward heat, and thus drive out the cold.

Physic Ball for Horses.—Take cape, or Barbadoes aloes, from six to ten drachms, castile soap, one drachm, spirits of wine, one drachm, syrup of any kind to form a ball. This is a reliable ball for the above purpose; as also one quart of the decoction of the butternut bark (*juglandis*). Previous to physicing a horse, and during its operation, he should be fed on bran mashes, allowed chilled water, and have plenty of exercise; physic is useful and necessary in most diseases — it improves digestion and gives strength to the lacteals by cleansing the intestines and unloading the liver, and when properly fed afterwards, will improve the horse in a remarkable degree. Physic, except in urgent cases, should be given in the morning and upon an empty stomach, and if required to be repeated, a week should intervene between each dose.

Alterative, or Condition Powder.—Alteratives are medicines that are supposed to have a slow but beneficial effect in altering some diseased actions of the vessels of the skin, or the organs of circulation, or digestion; good

to be given in mange, surfeit, &c. Rosin, nitre, and flour of sulphur, each two ounces; levigated antimony, one ounce. This will be sufficient for twenty doses; give one every morning, or morning and evening as the case may require.

Cordial, or Invigorating Ball.—Powdered camphor, one drachm, powdered ginger, two drachms, allspice powdered, three drachms, caraway seed, powdered, four drachms; make into balls with syrup, or give as a drench in gruel.

Fever Ball.—Cape aloes, two ounces, nitre four ounces, molasses to form a mass; divide into twelve balls, and give one morning and evening, or give it in bee balm, or spearmint tea as a drench, until the bowels are relaxed.

Fever Powder.—Nitre, camphor and ginger, each one drachm, powdered and mixed—to be used after the bowels have been opened.

Astringent Drench.—Tincture of opium half an ounce, ginger one drachm, wheat flour one ounce; give in a pint or more of tea made by steeping the bark of the mountain ash (Alkanoke), repeat if necessary.

Temporary Lifting.—When you wish your horse to prick up his ears, and carry a good tail, and show off to good advantage for a brief period, take a piece of ginger root, about half an inch in length, scraped or split off, wet with spittle, and tuck it up the anus, a finger's length or so, just before you start off; used occasionally is rather beneficial than otherwise—keep shady, of course.

Anodyne Ball.—Has the effect to mitigate pain;

opium, ginger, one drachm each, and camphor gum two drachms, pulverised and worked into a ball with syrup, makes a useful ball for this purpose, and for purging or looseness of the bowels.

Opodeldoc.—Take of the best hard soap two ounces, camphor one ounce, strong spirits one pint; mix the soap with the spirits, and let them stand in a moderate heat, until the soap is dissolved, occasionally shaking it; then add the camphor, and continue shaking until the whole is dissolved; useful in saddle and girth galls, sprains, bruises, and to disperse swellings, &c.

Liquid Opodeldoc.—Take four ounces of spirits of camphor, one ounce of laudanum, one ounce of aqua ammonia, mix all together and keep closely corked; this is equal to the first for any or all of the above purposes.

Sumach.—As a temporary relief for heaves, irritated larynx, or trachea, the blossoms or boles of the sumach, or shoemake, picked fine or powdered, and fed to the horse in his grain, are useful sometimes, owing to its soothing and souring qualities.

Oil of Spike.—Should you have occasion to use this article, which is in high repute by some, it is made thus: by mixing about equal parts of spirits of turpentine and common tar together, and well shaking, though it is said to be made from a certain berry, which it seldom if ever sees (spikenard and bay berry).

Hoof Liniment.—For a common cheap liniment, for hard hoofs, take equal parts of spirits of turpentine and hogs lard, and mix them; for sores or swellings, add camphor gum and hartshorn, if you like.

Another Astringent Drench—cheap and reliable; take

one gill of wheat flour, tie it up in a linen rag, boil it in water two hours, when it will become quite hard; then scald two quarts of skimmed milk, and grate the flour off into the milk, stir, and when sufficiently cool, will be fit for use.

MALLENDERS AND SALLENDERS (GOUT).

The former of these are a scurvy eruption, breaking out of the back part of the fore leg, at the bend of the knee. The latter is the same, only confined by the hock of the hind leg. Gross habit, feeding, want of exercise, and cleanliness, is the cause of this difficulty.

Cure.—Give a little rosin and burdock root, powdered, daily in their food; keep them clean, with sufficient exercise, and merely rub the parts affected with hot drops, two or three days in succession, is all that will be necessary to effect a cure. The same treatment is also beneficial in grease heels or swelled legs.

Mange Ointment.—Powdered aloes two drachms, sulphur four ounces, lard or oil six ounces; mix these well, and rub it on with the hand or brush well into the hair, on the parts affected.

Lotion for Strains and Tumors.—Nitre and muriate of ammonia each one ounce; dissolve in a quart of hot water, and add two quarts of vinegar. Bathe the parts affected frequently.

Embrocation for Strains, &c.—Olive oil six ounces, aqua ammonia two ounces, spirits of turpentine one ounce, origanum oil two drachms; shake the bottle well before using, rub the parts twice a day until it becomes hot and tender, and observe rest.

FIRING AND BLISTERING.

Firing consists in the application of a red hot iron to the skin, but should never be used so as to reach through the skin. The violent inflammation thus occasioned, rouses the absorbents into action, to that extent, that callous and bony swellings may sometimes be removed by it. Before the iron is used, the hair should be shaved from the part intended to be fired. And after the operation is over, the part fired should be rubbed with some blistering ointment, and the horse should be properly secured to prevent his biting it. After four days, apply a little oil, and when the incrustation formed by the blister is sufficiently softened to be removed, wash all off with soap and warm water, and if necessary the blister may be repeated after ten days.

Firing, used as formerly, was resorted to for the purpose of curing spavins, curbs, ringbones, windgalls, and old callous swellings of the back sinews—the consequence of strains. It was also employed to strengthen the hocks and back sinews of colts, to prevent strains and breaking down; it was thought that it did this, by thickening and contracting the skin, so as to act as a permanent bandage. This may be all true, and have been of considerable use to some in former days, and may possibly be of use to some at the present day. But if the astringents as given heretofore in this work, should answer every purpose of the hot iron (or firing), there will be no need of subjecting the animal to this torture and cruelty. For it is certainly attended with less

trouble and risk, both to the horse, as well as the operator.

Blister Ointment.—Hog's lard four ounces, oil (spirits) of turpentine and Spanish flies, pulverised, each one ounce. This blister is sufficiently strong for most purposes of the horse.

A Mercurial Blister.—For splints, spavins, ringbones, &c., add to the above blister ointment, one drachm of corrosive sublimate, finely powdered.

Strong Liquid Blister.—Spanish flies, in gross powder, one ounce, oil of origanum two drachms, oil of turpentine four ounces, olive oil two ounces; steep the flies in the turpentine two weeks, strain off, and then add the oils.

Mild Liquid or Sweating Blister.—Take one ounce of the above named (strong), and add one and a half ounces of goose or olive oil.

Laxative Clyster.—Thin gruel or broth, five quarts, salts six ounces.

Clyster for Gripes.—Mash two common sized onions, pour over them two ounces of oil of turpentine and a teaspoonfull of cayenne; mix the whole with four quarts of warm water, sweetened with molasses.

Nutritious Clyster.—Thick gruel, made of oat meal, three quarts, add one quart of good ale or milk.

The Dead Shot.—In giving balls, see that they are not too hard, nor too large, for fear they might prove fatal, like the cannon ball; and for the same reason, it is well enough to know what ingredients they are made of.

Hoof Liquid.—Mix half a pint of spirits of turpen-

tine and tar together, then add one pint of lamp or whale oil, stirring the whole well before using; this softens and toughens the hoof wonderfully by brushing them over with it night and morning. And when you can add to the above one pint of chamber lye that has stood in some warm place, in an open vessel some four weeks, or until it becomes oily and ropy, it makes the very best application for contracted hoofs, &c.

Elder.—The leaf of the sweet elder (as it is called), boiled in lard, makes a very soothing emollient application to wounds and sores. The juice of the leaves, or bark, of the poison or Dutch elder, is highly useful in destroying fly blows or maggots in any kind of wounds, &c. Its salutary effect will soon be evident on turning it on them, and in preparing the wound to heal.

Lard is the basis of all ointments.

Rosin is often used to give consistence to plasters, where the degree of irritation which it might produce is not regarded, or would be beneficial. The only use of wax, is to give consistence to ointments and plasters.

A Mash.—There are three objects in view, in giving mashes, viz: firstly, to cool the system; secondly, to assist in opening the bowels; and thirdly, for the purpose of concealing medicines which may be necessary to give the horse.

Mash No. 1.—Take one gallon of bran, one quart of sassafras tea scalding hot, one tablespoonfull flour of sulphur, saltpetre one teaspoonfull.

Mash No. 2.—Take one gallon of oats, one tablespoonfull of sulphur, and the same of burdock root

(Lappi) dried and powdered, and boiling water to scald the mass.

Mash No. 3.—An excellent mash in cases of catarrh and sore throat, and as an emollient, in any intestinal affection, is made by adding bran to an infusion of linseed. And you may add to any of the above ginger, burdock or cayenne, for colds, or any thing else to suit the disease you are contending with.

Adhesive or Sticking Plaster.—Take five parts of common pitch (or diachylon salve), and one part of Burgundy pitch, melt them together and stir until well mixed, and the plaster is made. Or you may take two parts (half pound) of common plaster, and one part (one-fourth of a pound) of Burgundy pitch; melt as before. Used sometimes in room of the surgeon's needle to advantage by shaving off the hair; in dressing fresh wounds, apply them in narrow strips, and so as to bring the margins of the wound together.

BALLS AND DRINKS.

Mode of giving a Ball.—Back the horse into his stall, and being yourself elevated on a box or stool, gently draw the tongue out of the mouth, so as to prevent its rising to hinder the passage of the hand. The tongue should not only be laid hold of, but should be firmly held by the left hand against the jaw. The ball, being previously oiled, should be taken in the right hand, and squeezed into as narrow a compass as practicable, and passed up close to the roof of the mouth, and the ball placed on the roots of the tongue, when both hands

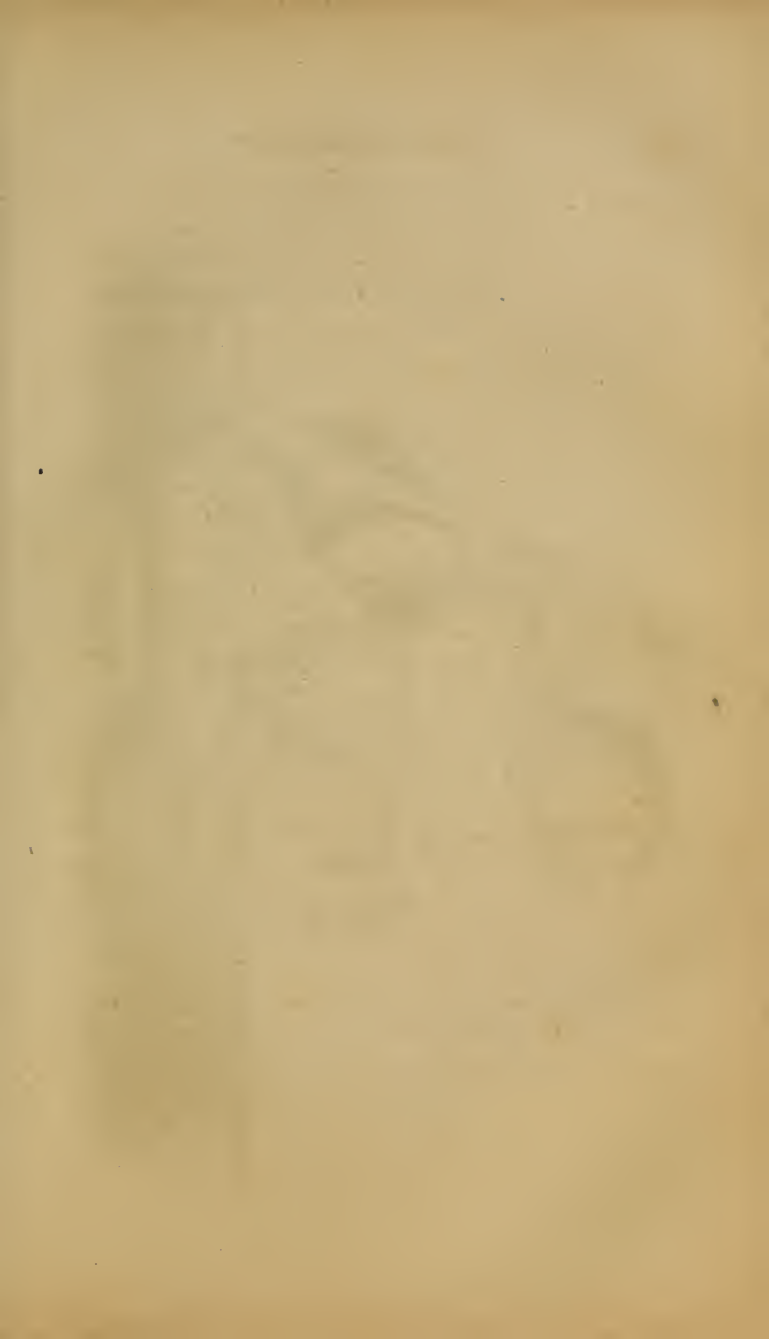
should be suddenly withdrawn, and it will readily pass down the throat. This method is preferable (with an expert hand) to using the balling iron.

Mode of giving Drinks.—Precisely the same operation is practised as in giving the ball, except that a tin or gutta percha horn, holding the drink, is forced up the mouth between the teeth, the mouth being raised above a level line of the passage, the drink being poured out of the smaller end of the horn well back to the roots of the tongue, and when the tongue is loosened the drench is swallowed without further trouble.

ROWELS

Are sometimes useful in keeping up a drain, to draw humors from parts; or by the irritation they cause, on one part, they lessen the inflammation on another part, not very remote. The same as unloading the bowels by physic, it helps relieve the surrounding organs, &c. Any person can apply a rowel by making an incision in the loose skin, any desirable length, say from one to four inches, according to the situation and object aimed at. Make the incision either up and down, or in a transverse direction, for this will facilitate the matter discharged; after pinching the loose skin and running the knife through, making the incision large enough to admit the rowel, or whatever you may choose to use for this purpose. A tarred rope may be used, or any kind of a string with pieces of sedge weed root fastened to it; or a round piece of leather with a hole in the middle, and smeared over with the blistering ointment. Each end

of the rowel should be knotted or tied together, to prevent the horse from pulling it out with his teeth, or by rubbing. Let it remain three days, or until suppuration has commenced; the rowel is then to be removed and cleaned every day, until the desired object is effected. Used for sweeny, and other disorders; I have known them remain in use for months.





RIDING AND DRIVING.

The art of riding on horseback (or equestrianism) is so closely connected with breaking and educating the horse (in fact it may be considered part of the same), that it will not be necessary for me to say a great deal on this point. However, it is one of the nicest accomplishments ever attained by gentleman or lady, and when once arrived at in any degree of perfection, the horse as well as its rider, never appears to better advantage, than when occupying this position.

The old method of whip and spur, did very well for the troopers, and required considerable ingenuity and skill, but the horse never appears so graceful when forced to do anything, as when learned to obey you by the slightest, unseen motion of hand, rein or whip; still he does this partly through fear, for he is a cowardly creature, though we find in his instinct a nobler principle blended with it, when developed by kind treatment—love. And besides this, the spur is useless to the lady equestrian; for her use, the horse should first be tutored by a man well skilled in this art, and then she has only to learn the horse alphabet, and mount her charger, with a feeling of pride (destitute of fear), to be able to cut all the airs and evolutions of a riding master.

The spur may be of use in breaking a horse that is restive, and may answer the purpose of ornament to some afterwards, without harm; but I hope never to see again

the horse's sides, by an inebriate rider, in a gore of blood.

A horse is easily alarmed, for he will even start from the hand that is going to caress him; therefore he should not be forced to that which he dislikes. But when a horse curvets irregularly, twisting his body to and fro, turn his head either to the right or left, or both alternately, but without letting him move out of his tracks, if possible to prevent him; for if he once gains his end, he will be likely to repeat that which has foiled his rider. Therefore when a horse shies or is frightened at any object, he should be used to some tone of voice which he may understand as an expression of dislike of what he is doing, for all horses will show at times a spirit of opposition, and especially if not properly subdued while being broke in; so when a horse shys, turn his head from the object that scares him (this is also applicable in driving) and press your leg to the opposite side from which he is expected to jump; then he will not spring on his hind legs to that side, because your leg prevents him from so doing; nor will he attempt to spring the other way, because his head is turned from the object of his fright; and a horse does not start and spring the way he looks.

The bridle is not the only power to govern the horse's movements; for instance, if the left spur touch him, and he is at the same time prevented from going forward, he has a sign given him that he will soon understand, to move sideways to the right. In the same manner he moves to the left, if the right spur is close to him; and afterwards, from fear of the spur, he will obey the touch

of the leg—the same as a horse moves his croup in the stall from one side to the other, when touched with the whip, or by the motion of the hand.

Every horseman knows very well that his horse never disobeys the motion of the leg, after being made acquainted with its use and meaning. By this means you have great power in controlling or governing the movements of your horse, for when you close one leg to him, he will move sideways, and when you close both legs to him, he moves forward. And even when he stands still, your legs held close to him keep him ever on the *qui vive*; when, with the least motion of the rein he will prick up his ears and raise his head, so as to show to the best advantage possible. All the airs (as riding masters call them) once depended on the use of the legs, in the guidance of the horse's croup, by which troopers were taught to close or open their ranks. But as the horse is, or ought to be educated in these days, for pleasure, sporting or war, there are other things brought into requisition which enable his rider to pursue the chase within his length of any marked spot, at the top of his speed, and at a given signal stop so suddenly and balance him on his haunches, as to prevent going over the precipice, and being hurled into the abyss below. Though when a horse starts, and is flying to one side, if you close the leg on that side of him, it will stop his spring immediately, and he will go past the object he started at, keeping straight on, or as you choose to guide him, and he will not fly back at anything, if you press him with both legs.

The rein is a necessary for the accompanient for the leg, hand and whip, in riding; by which means you can

break the trot or gallop, if desirable, which sometimes is of great use, for no horse can trot a mile as quick, without breaking once or twice, as the trot is the most straining gait to the muscles, and he will more than make up what he loses in so doing, before he goes the mile. It also guides the horse in the gallopade, or race, when it should be drawn taut for this purpose, and to support him in case he should happen from any cause to stumble, as well as for the safety of the rider. In learning the horse to pace, the rein is indispensable. This will also apply with equal force in the act of leaping hurdles, or hedges. It should be used with the greatest care, in attempting to swim your horse across rivers or lakes, for if he should get his legs entangled in any of his trappings, he would draw his head under the water and be sure to drown himself, if he did not his rider. Unless it is with some experienced hand, the curb and snaffle check, had better be dispensed with altogether. Sit straight up, and in the centre of the saddle, having your stirrups neither too long nor too short, and keep your elbows close to the body; carry a tight rein in one hand, and a whip in the other, if you choose.

With the following remarks, which may possibly be of some use to the inexperienced, I shall dismiss the subject. Riding is an invigorating and healthy exercise, and is fast taking the place of the ancient gymnastics. It helps keep up the equilibrium of the body. It is a harmless amusement that both sexes may enjoy with the highest degree of refinement.

The youth though healthy and strongly constituted,





are not generally inclined to great mental exertion, till their bodies are to a certain degree fatigued (I do not say exhausted), until this fatigue is produced in someway, their bodies have a preponderance over the mind; this truly natural want can not be silenced without it. "Each muscle requires exertion, and the whole machine strives to employ its powers. This is vulgarly called, to have no sit still flesh." If the fatigue is brought on, the call for bodily exertion is stilled, the mind is no longer disturbed by it, and its labors are facilitated.

Riding is also a peaceful and innocent exercise, which gives acuteness to the senses, and penetration to the mind. And when more of our village belles, have learned to imitate our modern Lady Equestrians, I shall be most happy to see them. So good bye.

(See directions for training, &c.)

DRIVING.

This is a very important branch of industry, wherever the horse may be employed, and perhaps as little heeded as any other in so common use, by a majority of drivers. A good reinsman keeps his reins drawn closely especially in all gaits faster than a walk. Here the order is reversed somewhat from that of riding in this respect — the rein has the chief, and I might say the only power of guiding the team on the road; though they might come to a halt without a little tingle.

A first class reinsman keeps an eye to the road before him, so as to shun all holes and stones that may happen to be near his track; this saves a great deal of wear and tear, both to his horses and carriage, and enables him to glide along by any team he happens to meet on the road, gracefully, without any seeming or visible effort of his own. He will also have his horses trained in such a manner that they will feel the slightest motion imaginable of the bit, made by the taut rein, so that they will not turn up to every house, or stop to talk to every person they meet on the road, or even at his own barn, until they have a sign given them from their master's rein or voice to do so.

The tight rein is a support to the horse in going over uneven ground, or down a hill, and is a sign to him when drawn on a plane, that he may expect something else unless he obeys this. In fact a good reinsman will drive considerably faster, safer, and with less straining to cords, muscles, wheels and gearing, than an awkward, unskilled driver.

There is another important point in the art of driving, that is (generally) but little heeded, that is, in driving a horse that is liable to interfere, and in fact this difficulty oftener arises from careless driving, than any fault of the horse. You will notice that they seldom cut but one leg, and where two are driven together, or side by side, it is almost invariably the freest or fastest horse that does this; because his head is pulled in from a straight line that he is traveling on, consequently it will be the outside leg that gets cut; to avoid which his head should be turned by a tight rein a little the other way from the straight line, which will throw the foot he cuts with out instead of in.

A great many horses, that are used for draft, in the snowy regions, are quite apt in crowding each other off from the road through fear, when the rein does not have much influence over them — which could be remedied by making the sleighs for those districts some six or eight inches wider than they are now used, an improvement that is much needed — especially where they have five or six months' sleighing in each year. This would make a road sufficiently wide for them to travel on without being in fear of falling off into the deep snow.

Now let us take a glimpse at the second or third class of drivers, and mark the contrast. He mopes along with his horse's heads down about to their knees, and his lines on a level with the same, going over every stone, hole or log that may be in his way, with no other means of quickening their pace except the use of the whip, which will be applied freely; and when his team happens to have life enough to become frightened at any-

thing, they start, and, before he is able to gather the lines sufficiently to stop them, his load is landed perhaps bottom upwards in the ditch. Well, he crawls up on the road again and loads up, goes along a short distance, and meets another team, when he has another dilemma to pass through. However he braces himself up in the fore end of his carriage and immediately succeeds in hauling up his lines sufficiently to turn his horses' heads to one side of the path he is pursuing; and then with both hands forward of the splash board, continually shaking the lines, and halloing "hep, hep, hep," he comes into the road again (in case they do not lock wheels) and then, with a free use of the whip, on he goes until he comes along near a house or another object where his horse wants to stop again, when he has only to repeat the last operation, viz: the shake, hep and whip, to go on as happy as a clam.

Men who drive fast, generally have fast horses; not so much because they have swift horses, but because fast driving makes swift horses. Therefore the best directions I can give you to make horses swift, will be in the language of another, "drive fast, and stop often."

A horse can generally be trained to a dull and logy, or to an airy and fleetly gait. Any strong and muscular horse, that is sound, and has been no ways previously injured, can be trained to a fast gait. Nature unquestionably does much; but education and training does far more towards producing the great difference in the speed of horses than most people are willing to admit. Horses are oftener injured by driving them beyond their habitual gait, than beyond their native power.

For example, if you want a fast walker, you must use him to that gait mostly, for a horse that is trotted most of the time while on the road, will walk very slowly whenever he stops the trot, and when he is trained to the walk, he is not capable of much fast trotting, previous to being trained for it, without injury to him. And so, if you want a fast trotter, you must use him to this gait, remembering the text, to drive fast, and stop often enough not to injure your horse's wind. And so with all other gaits, for there never was a two-forty horse (trotter) without previous training.

The farmer who wishes to have his horse show off to good advantage at any particular village, or at the market (for instance), and has not given his horse the necessary exercise to give strength to his muscles, &c., although his horse may be fat and look finely, must drive slowly and cautiously within a short distance of the place, when he will not be doomed to disappointment; for driving him fast then a short distance will not injure him, and he will show well. But, on the other hand, let him drive so as to go in with his horse all sweat, and his spirits drooping, and he will appear in the worst possible plight he could fix him; and would need the best of care to prevent him from taking cold, and perhaps becoming diseased.

The property and even the life of men, women and children, often depend on the art and skill of the reinsman, or in careful and correct driving. Thus it is, that owners of horses, should not entrust those noble animals to careless and reckless drivers. And all those who are entrusted or employed in this occupation, either for them-

selves or fellow men, should be sober, thinking men, and aware of the above fact, for their own benefit, as well as for the horse they drive. And then the horse would not often be under the necessity of calling out (if allowed to talk) as he is said to have done, by the expression found in the following lines:

“Up the hill urge me not;
Down the hill trot me not;
On the plain spare me not;
To the hostler trust me not.”

Name and Situation of the Parts of the Hoof of the Horse.



[See page 30.]

GENERAL REMARKS ON DISEASES, &c.

I deem it a duty I owe the public, as well as myself, to offer some general views on this subject, before I conclude this work, which I shall be under the necessity of doing in my own way, and my story is told; as I have proceeded thus far without dictionary or library, with the exception of a few old almanacs, papers, and recipes that I had carefully preserved and had in my possession, which I hope will answer for all apologies necessary for the more learned, for any and all the errors I have or may commit.

The same principles existed in nature when the world began, that exist now, and the same that will exist for all time to come. When any new discovery is made by man, or anything new appears to us, it is only because the mind is more fully developed, or brought nearer the object, and capable of receiving the truth as it existed before. We must necessarily learn much from great men and great minds, that have lived before us; but we should not content ourselves with this alone, for then we should go back instead of progressing in usefulness. For they in their aspirations to grasp great things, overlooked (to them) many smaller ones, which are of the greatest importance to mankind, which experience teaches that we can pick up and improve on, only by the closest observation of passing events, and all our wants.

That a reformation is needed in a great many of our stables, both in country and town, in medicating, driving and caring for the horse, will be readily admitted by

those that have numbers of them drawn to the shades or shambles every year, if by none else.

I am about to make some remarks about horses, and disease, that will be well for all to remember that feel an interest in this important subject.

I am not so much in favor of blood-letting, or physicing as a great many, but I consider the fleam and lancet much safer in the hands even of the inexperienced, than I do the stimulating drugs and oils commonly used by them, for this reason: the common sized horse contains from twenty to twenty-four quarts of blood on an average; of which four quarts may be taken without materially injuring him at any time, and in cases of acute inflammation and fever, as of the lungs, &c., one-third of the whole has been taken to advantage; and it requires four-fifths of the whole to be taken to produce death. He is not so liable to suffer from depletion, in this way as he is from physicing, and the effects of these poisons (allowing they are carried to excess). For the blood is sooner supplied by nature, than the bowels, stomach and bones can be restored by art to their wonted office and health after being so deranged in all their parts.

I prefer vegetable medicine to mineral, for most diseases—not that I would take the course of some, and call all mineral substances poison, for as deadly poisons are found in the vegetable kingdom as in any other. But because it is cheaper, as almost every person can gather all he needs for himself (without money and without price) and is generally given in teas, drinks and mashies; which are more cooling and soothing to nature, besides this, it is safer in most hands.

Is it too much to say that more than one half of all the diseases of the horse arise in the first place from bad management, or from want of good management: from an improper system of feeding, over medicating, from ill-constructed, unventilated and filthy stabling, or from injudicious driving and neglect of cleaning, and from an untimely or improper use of the blanket? To learn my views of which you have only to turn and read that which I have written on this point.

Every proprietor of a stable should be capable of managing all ordinary complaints, within his own stable; but as this is not always the case, the horse is often left to the mercy of some fellow who really knows nothing more about the structure and wants of him, than he does about the model of an engine, or the economy of an empire. And yet he trumps loudly and has a thousand and one infallible remedies for almost every disease, the names of which he does not know, neither their causes, origin, or operation on the system; and if he knows their names, he is entirely incapable of distinguishing one from another. He applies, hap-hazard, these hot drugs, totally ignorant of their effect on the system generally, or on the particular disease, and nine times out of ten he may apply them wrong; and so aggravate ten fold, the disease which he pretends to be able to cure.

To remedy the above evil, I would recommend that every such person should be obliged to swallow one-fourth the quantity of the same kind of medicine that he is going to give the horse, whether it injured the horse or not. When you find one that is willing to stand this

test (or can explain satisfactorily the nature of the disease, or the effect of the medicine he recommends), you need not be afraid to employ him to doctor your horse. If this fiery ordeal is thought too severe a test, I would say that most diseases of the horse are analagous to ours and require about the same mode of treatment.

Notwithstanding the horse is often taken suddenly and dangerously ill, when the ingenuity and skill, even of the most experienced may sometimes be taxed to tell the precise difficulty immediately (and it yet is necessary that something should be done on the spot, to relieve his suffering, and expedite a cure, before medical aid could be procured), there are those palliating medicines, innocent in themselves, and often useful, that may be administered in the meantime (of which I have recommended), and nine times out of ten, are all that are necessary to be given to effect a speedy and permanent cure, whereby, if relief had not been found in this way, the malady might have gained such headway, that when advice arrived, it would be too late to check it. Although at these times we should be cautious in giving physic as well as when poisons have been taken, for in cases of acute inflammation of the bowels, &c., it might prove fatal. He that remembereth these things doeth well, for how much wiser is a man to-day for what he has forgotten?

FEEDING AND MEDICATING.

The researches of physiologists and botanists, have demonstrated this fact, that the fibrin, the albumen, the oil, and all those earthy salts that go to form bone and muscles in animals, are found in their food, in plants and

vegetables, and in their seeds and grain, and that the animal appropriates them ready formed, which goes to show that the stomach of the horse is not a chemical laboratory for the manufacture of these constituents, but that they are selected from the food he eats, by the stomach, and deposited where they are required.

It is said also, that from every five to seven years, the whole body of the horse in all its parts undergoes a change, is thrown off, and again renewed. Then each day, a portion of the animal is passing away (in excrement, in perspiration and respiration), and in each day nature endeavors to repair the loss, for there must be a constant building up and repairing of the body going on at all times, consequently it becomes absolutely necessary that the proper building material be furnished, or the whole structure becomes weak and worthless. This also teaches us that such food is necessary for the horse as will supply the component parts of the body, in right proportion for the healthy action of the whole.

Long experience has taught us that oats is the best kind of grain (dry food) we have for constant feed for the horse, though it does not contain as much nutritive matter per bushel, as some other kinds of grain that are given in a more concentrated form, all which is more or less prejudicial to health. The above, with some remarks I am about to make, will, I think, prove my position correct as to feeding, and the propriety of an occasional change of feed, &c., heretofore given.

When the heavier and hot kinds of grain are used, it is best to have it ground and mixed with good cut hay or straw, so that you feed the same amount of nutritive

matter, with the same bulk (as near as you can), as you did when feeding oats and hay. Nature plainly shows this to be a correct principle, and also the importance of a change of diet occasionally, in the seasons, in the fruits, and in the green food she yields for our sustenance. Extract the nutritive properties from the food we eat, and take our food in that form, will it long sustain life? Certainly not.—*Liebig*. The bony framework of animals, owes its solidity to phosphate of lime, says Johnson, and this substance must be furnished by the food. The ordinary kinds of food contain a large quantity of vegetable fibre or woody matter, which is more or less indigestible, but which is indispensable to the welfare of herbaceous animals, as their digestive organs are adapted to rough and bulky food. The addition of a small quantity of food, rich in oil and albuminous substances, may be made advantageously, but neither hay alone, nor concentrated food alone, give the best result. This fact should be impressed on the mind of every farmer, and by every day practice. Every animal of a higher organization than a worm (and they often crawl out of the earth and partake of the cucumber and cabbage plants), needs a diversity of food to make up a healthy animal structure. The similarity to other green food, together with the pectic acid that carrots contain, causing thorough digestion of other food, renders them a desirable article of food for the horse.

The horse may be compared (with some propriety) to the steam engine or railroad locomotive, the lungs being the furnace, the stomach the boiler containing the water,

and the groom, the fireman that puts in fuel to keep the whole in motion. The food of the horse after being masticated, is taken into the stomach, and there digested; then it passes into the intestines, and the nutritious portions are mingled with the fluids or gastric juice, when it is sucked up by an infinite number of mouths, or lacteals, which are connected with the blood vessels, from whence it is carried in the form of blood through the heart and distributed to every part of the system. While a portion of the gum, starch and sugar, contained in vegetables are used by the animal, in respiration or creating heat to the lungs, and other portions of the body. These substances consist of carbon and water only, the carbon combining with oxygen, is breathed out in the form of carbonic acid. To say no more about the niceties of his complicated structure, it is just as evident that the horse requires food that contains these properties in right proportion for his constituent parts, as it is to suppose that the engine must be supplied with wood and water, in order to get up steam enough to propel its machinery (and one is about as complicated as the other); and when these properties are not found in sufficient quantities, or in right proportions, in the food of the animal, or in wood and water for the engine, then the oil for lubricating the machinery is drawn upon for fuel, or the fat and flesh itself of the animal goes into the furnace, and the whole is soon burned out, when it ceases to exist. But when both are properly supplied with food and fuel, they may be seen puffing and snorting across the plain together, until the one challenges

the other in the distance to come on and bear him company.

An excess of hot food, as corn, &c., fails to excite the coats of the stomach to secrete their digestive fluids (heating the furnace too hot), while the other parts are left unsupplied, such as goes to help form bone, muscle and fibres of the animal, which must result, if persevered in, in the total destruction of the whole animal structure.

Thus we see that when the inward heat is raised too high by the use of medicine, or by feeding any of the heavier kinds of grain, for the healthy action of the whole system, the proper remedies to be employed is to feed the more cooling and lighter grains, that I have heretofore mentioned,* which will supply the wants of each and every part of the body, in just proportion to benefit the whole. And it is precisely the same thing in medicating the horse; when the lungs (or furnace) is too hot, you should not fan the flame by adding more fuel, in the form of those stimulating drugs so often used; but when there is a want of vitality (or the fire is too low), use the articles I have recommended for this purpose, sufficiently to raise it to its natural heat, and then

* The virgin soil will produce almost any kind of vegetation, under a proper state of cultivation; but you continue to crop it with one kind only, it will soon exhaust all the qualities of the soil that are required to grow that particular crop; and in this way you may keep on with the different kinds until you impoverish the whole, and it becomes barren. So it may be with the horse; he may be fed on one kind of food, deficient in the requisites to form bone or muscle, while the other organs of the body lay dormant, for the want of the healthy and invigorating influence of them; or, vice versa, when he will appear raw-boned, carrying but little flesh.

nature will keep it burning; and you will save the extra wear and tear of the machinery consequent on raising it too high.

REMARKS

ON THE COLLECTION AND PRESERVATION OF VEGETABLES, FOR MEDICINAL PURPOSES.

It is proper to observe, that roots should be gathered before the sap rises in the spring, or after it returns in the autumn, and taken from the driest land where they grow. In washing let them remain in water as short a time as possible, or dry them without washing, and clean them with a brush afterwards. Those which lose their virtue by drying, may be kept in dry sand. Leaves and flowers should be gathered in dry weather, after the dew is off, and while they are in full vigor; they may be tied up in little bundles and hung up to dry, but a better way is to dry them more quickly by the gentle heat of a stove, or fire place. Seeds and fruit are generally to be gathered when ripe; sprouts after the bud is open; stalks in autumn; and barks, in spring and autumn. Overgrown herbs, should not be chosen, as they are not so good for medicinal purposes as those of a medium growth.

RECIPES.

Since I commenced writing, experience has taught me that the swamp, or black ash extract, is an excellent remedy for sores and pimples, or gathering in the ears, by only applying a few drops; and can be used successfully in taking off ringbones, &c., (as well as removing warts) when diluted with a small part of turpentine, or tincture of cantharides: and when used alone has taken them off without breaking the skin, or leaving any blemish. I obtain it by boiling the inner bark of small trees or roots, until the strength is out, then strain and boil down to the consistence of thick syrup. For the ears dilute with water.

ABORTION.

The mare has often been lost by aborting. The best thing you can do for her in this situation, is to inject up the vagina a strong infusion made by steeping the common red raspberry leaves in water, using it as warm as practicable; keep her warm, and give her rest, together with a cooling diet.

FOR ACUTE INFLAMMATION OF THE BOWELS, OR INFLAMMATORY COLIC.

You may give the horse a large spoonfull of equal parts of sulphuric ether and laudanum. Or if you do not really know what the difficulty is, half the quantity will do him no harm; or you may give him mint or sage tea; and if he is in great distress, give peppermint essence,

camphor and paregoric, a spoonfull of each in warm water, sweetened, which will either cure your horse, or ease him until you have time to send for advice.

CARROTS.

The orange carrot is cultivated in gardens, and is well known to every one. The root of which scraped and wilted with hot vinegar, is good made into a poultice, with or without Indian meal, to subdue inflammation and swelling; and when mixed with pulverised charcoal, is good to prevent mortification.

CORKS.

A very good paint to keep out dirt and cold from corks, is made by melting equal parts of mutton tallow, and India rubber together, and then paint or fill the wound with it; for the want of the rubber use tar, and when you wish it to heal, add a little rosin and honey.

WAH WHOOP.

Some of our best professional men have said to me, that it was folly for any one to suppose that the Indian doctors knew half as much about the healing art as the scientific scholar, who had all the advantage of our medical institutions, in this civilized life, with a full view of the arts and sciences before him. As regards anatomy and diseases, I am willing to admit that they are right in their conclusions; but as the Indian has had the book of nature only for his study, it has enabled him to discover the medicinal properties of a great many plants, roots and barks, that are useful in disease (which the more learned have overlooked in their aspirations to grasp great things); which goes to show that the Indian is not void of intellect, and that want and "poverty is the mother of invention." Therefore, I shall add here the names and use of such vegetables as I have in my possession (together with some of my own), in plain English, as they were translated from the Indian tongue, by one that had spent some twenty years of his life in travel and traffic among the Indian tribes, which may be of great use to some in veterinary practice, both in urban, suburban and rural districts.

"Roots and herbs are at the command of every one, and nature's prescriptions are all free gratis. She demands not your money for her services, but, like a kind patron and friend,

invites you to partake of her blessing, and her only reward is to come and taste more."

No. 1.—WHITE OAK BARK AND BUDS.

The inner bark of the white oak pounded and boiled with oats, and applied as a poultice to any wound, cut or sore, is a very good remedy. The leaves and buds, when steeped, are said to be a sovereign remedy for dysentery or a relaxed state of the bowels. A handfull of flour, made from the dried acorns, mixed with the feed of animals, will stop dysentery.

No. 2.—SNAKE ROOT.

Is found in both dry and moist wood land; the stalk and leaves somewhat resemble the stinging wood-nettle, only the leaf is smaller and more of an oval form. It blossoms on the top of the branches, and they are white; the root is brown and bushy, and of a very strong aromatic taste and smell. This is a very powerful, stimulating root, bracing, healing and cleansing, cheering and animating the whole system. Makes an excellent cordial; put in wine or old cider.

No. 3.—INDIAN WORMWOOD.

It grows along watery places; it has several stalks together, two or three feet high, with long, narrow, dark green leaves, which are extremely bitter to the taste; above the leaf it has blows. This herb is said to be both anthelmintic and cathartic; the pulverized herb, given in small quantities, is good to remove worms; the herb steeped is a very quick and powerful physic, though very mild in respect to griping; the top only is used.

No. 4.—PEPPER ROOT.

This grows in a rich, moist soil, generally among beech, maple, and basswood timber, and is generally known, the top being sometimes used for greens; the root is white and jagged, of a warm, peppery taste. The root bruised and taken in spirits eases pains in the stomach, sides, and bowels. The pounded root applied to the spider cancer, will frequently kill them in a short time, so that they may be taken out by the roots.

No. 5.—LARGER GOLDEN THREAD,

Is a vine growing on banks of rivers and intervalles. It is similar to *Jacob's ladder*, and winds itself around the first bush it comes to, like the *bitter sweet*. The root runs under ground some distance, about the size of a pipe stem. It is quite bitter, and has nearly the virtues of the little golden thread, and is, of course good for canker in the mouth, and in all cases where a little bitter is required to strengthen digestion, and cause a good appetite.

No. 6.—HORSETAIL.

This plant has a bushy top, full of joints, resembling a horse tail from which it took its name. It is powerful to stop or staunch blood, either inward or outward; it healeth inward ulcers; it is good to heal green wounds, and cures ruptures.

No. 7.—GRAVEL WEED.

Grows on dry land among wintergreens; the stalks or vines run along on the ground, and take new root; the leaf is oval, of a pale green, thick and rough, not hairy, as wide as a spoon bowl, but not so long, and bears a

small, white blossom; it grows in little mats, like camomile, with the leaves thick together, almost one top of the other. This, in truth, is a lithontriptic; the leaves and vines steeped (not boiled) bring away the sand, and finally dissolve the stone.

No. 8.—HEMP.

This plant is good for something beside making ropes. The seeds steeped, are good to remove wind from the stomach; it removes obstructions to the bile, and is very effective to kill worms in man or beast; the steeped juice dropped into the ears kills the worms in them, and drags out earwigs; a preparation of the roots is good to allay inflammation in the head, &c.

No. 9.—ARTICHOKES.

A decoction of the juice of artichokes is good to open the passages of the urine; and of course it must be good for stone or gravel in the bladder.

No. 10.—MAY WEED,

Is an excellent herb, and grows in door yards, and by the sides of the road; it is of a pectoral nature, and is good for a pain in the side; a strong tea of it, drank freely, is good for a cold.

No. 11.—SAFFRON.

This is principally cultivated in gardens, and has a bright, yellow blow, and is universally known. It is good made into tea, to cleanse the fluids of the stomach, and guard against sickness, and for bathing any affected outward part. It is also good to drive out humors; with

other vegetables it makes an excellent drink for a disordered stomach.

No. 12.—RED ROSE.

This is the queen of all flowers, and, though short lived, falls not a useless sacrifice. The leaves dried and steeped in milk, are very cooling, quieting and good for sore eyes, and useful in allaying inflammation.

No. 13.—VERVINE.

Has two colors, blue and white; is a good medicine in fevers, and for all consumptive complaints. It makes a harmless emetic, and may be taken powdered; mixed with thoroughwort, or made into a tea, is good for a weak stomach.

No. 14.—WITCH HAZEL.

This is a small bush or tree, it grows in swamps and wettish land, by the sides of creeks and rivers. A tea made of this, and drank freely, is good to stop bleeding at the stomach. It is good in all bowel complaints; the bark boiled in milk and water, is good for those afflicted with strain across the kidneys.

No. 15.—CROWFOOT OR BUTTERCUP.

This is a tuber-rooted, perennial plant, very common in rich meadows and moist places; it grows from one to two feet high, and has a very glossy flower. Every part of this plant is acrid. Those who wish to endure the pain of a blister, may have their ends gratified by making use of this herb.

No. 16.—SUMMER SAVORY.

Is a garden herb, and has a hot, pleasant flavor. When made into a tea, and drank freely, is good for a cold; is very soothing to nature, and may be used with perfect safety in any disease, of man or beast.

No. 17.—CURRANTS.

This bush is too well known to need a description, being found in almost every garden. The leaves made into a tea, are good for the dropsy. As a constant drink, it promotes a free passage of the urine.

No. 18.—SWEET FERN.

Is a small shrub that grows common in pastures, and by the road side, in many places; the bark of this bush steeped in cider, is good for jaundice (or yellow water). Taken in the spring of the year, it will give a start to the blood, and create a good appetite. A tea made of it will often answer a good purpose for dysentery.

No. 19.—PLANTAIN.

There are few, perhaps, who know the virtues of this simple though useful plant. It is good to cure poison, caused by ivy, dogwood, and the bites of venomous animals, and will drive away humors by applying the juice.

No. 20.—STRAWBERRY LEAVES.

These need no description. The leaves steeped in boiling water, and drank freely of, are good for inward fevers; and a few of the leaves chewed, and the juice swallowed, will stop the dysentery.

No. 21.—HIGH DEERWEED.

This is generally to be found in newly cleared lands, from two to three feet high, and has on its stalk, towards the top, a spindle of red blossoms; the leaves are long and quite narrow. This is good for all inward inflammation and fevers; it is of a cooling nature.

No. 22.—EYEBRIGHT.

The common eyebright is a small, low herb, usually rising about a span high. It has generally but one blackish green stalk; it spreads from the bottom into several branches, on which are set small leaves, which are nearly round and pointed, of a dark green color, and finely notched about the edges; they are thick, and two always set together at the joints, the leaves turned upwards; from the middle spring forth small white flowers, mixed with purple or yellow spots or stripes. It has small seeds in round heads. It has small, slender roots, with thready ends, and may be found in meadows and grassy places. The juice, or distilled water of this herb, taken inwardly, in white wine, or put into the eyes, is good for all things causing dimness of sight; or it may be taken, in a powder of the dry herb, mixed with a little sugar, mace, or fennel seed; has a powerful effect to help and restore sight, decayed through age; it has been known to restore sight to those who have been nearly blind.

No. 23.—DOG ACNA.

This bush grows in various soils, and is covered with a smooth, speckled bark, of a light and dark green. It branches out very much like the dogwood. The bark of

this, made into a tea, and used as a wash, is good for a canker, and combined with the bittersweet, makes an excellent healing salve.

No. 24.—RUNNING HEMLOCK,

Is a little, low bush, the leaves resembling the common or tall hemlock that grows wild in the woods, of a light green color, and has a small red berry. These berries are good for a weak stomach; the bush or vine is good, boiled in water, to cure swollen limbs.

“By the image of every herb, the ancients first found out their virtues. Modern writers laugh at them for it; but I can not (says one) but wonder how the virtues of herbs came at first to be found out, or known, if not by their signatures. The moderns had them from the ancients; the ancients nor Indians had no writings nor books to obtain them from.” But what an improvement has been, and remains to be made by the study of the leafy pages of this great book of “Nature,” after it has been once opened to our view. Reader, please look at the index of this great work, which you will find in the expression of every leaf, and see if it does not lead you to something more useful and interesting. Oh, how cheering, animating, and elevating it is to the mind of mortals!

No. 25.—FOR THE BITE OF A DOG, OR PRICKING OF A THORN.

Take green leaves of hoarhound, bruise, and boil them in hog's lard into an ointment, and apply it to the wound. Continue this for a short time, and the swelling will abate, and the sore be completely healed.

No. 26.—TO TAKE A FILM FROM THE EYE.

Take sugar of lead, make it very fine, blow a little of it into the eye, morning and evening, by means of an oat straw, and when the film is nearly consumed, apply a drop of hen's oil once or twice a day until well.

No. 27.—FOR A COUGH OR PHTHISIC.

Smoking the dried leaves of rosemary, shred small, in a tobacco pipe, will help those troubled with a cough or phthisic, or of a consumptive habit, by warming and drying the thin distillations which cause those diseases.

No. 28.—FOR THE HEART DISEASE.

Make a decoction of the dried leaves of red roses with wine, and apply it to the region of the heart, with a sponge, or let the leaves remain in, and bind them on over where your heart beats, shifting them often till you find relief.

No. 29.—FOR A BURN.

Take an onion and cut it in halves, warm it a little (but not roast it), and bind it on the affected part; it will stop the soreness and the inflammation, by drawing out the humors, which always accompany a burn if not prevented.

No. 30.—TO CURE VEGETABLE POISON.

Take yellow-blowed celandine, hawk weed and toad plantain, equal parts—bruise them fine, and boil them in milk sufficient to get the strength of the vegetables. Wash the affected part with this several times a day,

and drink bitters of the Indian milk weed (bitter root), steeped in gin, to keep it from striking to the stomach. This will physic the blood and cure the disorder. A simple and effective remedy.

No. 31.—STRENGTHENING PLASTERS.

Good for man or beast. Take a pitch pine knot, boil it in water till the gum is out; then let it cool, and take off the pitch. Spread a plaster of this on soft leather, and apply it wherever it may be wanted. If it is too powerful, temper it with a little rosin or beeswax. Hemlock gum is good for a like purpose.

No. 32.—FOR DROPSY.

Take one pound each of prickly ash bark and bark of sassafras root, feverwood bush half a pound, four ounces of parsley roots, and the same of the bark of black birch, and of horse radish roots, and three ounces of garlics; boil them all in three gallons of small beer; drink nearly a gill three times a day, or a pint is a dose for a horse. It is a powerful diaphoretic, invigorating cordial; no better can be given for the above disease.

No. 33.—FOR WEAKNESS OR GENERAL DEBILITY OF THE
WHOLE SYSTEM.

Take of lovage root, comfrey root, each half a pound, and burdock root four ounces, spikenard root two ounces, to about two gallons of water; boil them two hours; strain off and continue to boil down to two quarts, then add half a pint of the best Holland gin, and one pound of honey, or loaf sugar; put it in a bottle and cork

it tight for eight and forty hours, when it will be fit for use. Dose, a tablespoonfull three times a day before eating, or one gill will answer for a dose for the horse. This has proved beneficial after every other remedy was unavailing.

No. 34.—FOR A COUGH.

Take a small handfull of hoarhound and of slippery elm bark (the brittle kind), and two tablespoonsfull of sage, and one of saffron, simmer together, strain off; add half a pint of molasses, and simmer again two hours, with a moderate heat, and while it is hot, add half a pint of the best Hollands. Dose, three times a day, commencing with a tablespoonfull, and increase as you like; this is a safe and reliable remedy for a cough, for man or horse.

No. 35.—CURE FOR THE ASTHMA.

Difficult cases of this complaint may be cured, by taking two ounces each of elecampane root, sweet flag root, spikenard root, and the same of common chalk; beat them in a mortar until very fine, then adding one pound of honey, and beat them all together; take a teaspoonfull three or four times a day. A tablespoonfull may be given to a horse to advantage three times a day, by working into a ball.

No. 36.—FOR THE SAME, OR HEAVES.

Take a seed bole of the skunk cabbage, that grows close to the ground, at the bottom of the leaves; if this can not be obtained, use the wild turnip (wake robin) with a little lobelia seed; stew this in hen's fat (after

cutting it up fine) four or five hours, till it becomes nearly dry; take a teaspoonfull for a dose, or a tablespoonfull, in a ball, will be a dose for the horse that is troubled with a cough. Make a syrup of the queen of the meadow roots, and white swamp honeysuckle blossoms; sweeten this with honey or loaf sugar; add to a quart of this syrup half a pint of brandy. To be given once a day with the above for heaves; one gill will be a fair dose for this purpose; cure warranted or no pay.

No. 37.—FOR A SORE THROAT.

Steam the throat with hot water, in which hops have been infused. After the hops have been scalded in vinegar, apply them externally to the diseased part of the throat.

No. 38.—FOR STOPPAGE OF URINE, URINARY BALLS.

Take a handfull of buds of currant bushes, and the same quantity of honey bees; steep them very strong in hot water, give two spoonsfull for a dose every half hour. For the horse, take one pint of this tea and boil down till it begins to thicken, then cool, and add about the same quantity of balsam of fir; work into five or six balls, one of which will have the desired effect. These balls may be coated with sugar, and kept for use any length of time—quite equal to the celebrated Murcum or Buck ball. The common white mulberry bush affords a tea, when freely given, that is good for all urinary obstructions, and facilitates the operation of other medicines; and is perfectly harmless in its operation.

No. 39.—TO CURE CANKER IN THE MOUTH.

Take the scrapings of the blackberry briar root, a few sumach berries, a little saffron, a little sage, and some goldthread or yellow root, put with these a little alum, some vinegar and honey; simmer the whole on a very slow fire, after adding a little water. Wet the mouth often with this; it seldom if ever fails to cure the worst canker in the mouth, and is an excellent wash for the horse's sore mouth in cases of Black Tongue, &c.

No. 40.—A PLASTER TO EASE THE PAIN OF FELONS.

Obtain the pitch from a pitch-pine knot, cut from the side of an old log that lies next the ground, by boiling it. Then boil four ounces of strong tobacco; after the strength is out, strain, and boil the liquor until it is thick; then add the pitch, and simmer over a moderate fire, stirring it all the while until it forms a salve; make a plaster of this, and wherever the sore is, lay it on above the next joint. This will ease the pain in a very short time. Dress the sore in the mean time with any other kind of healing salve. This also is a good application, and a useful plaster for horse flesh, in inflammation of any local wound, placed on or above the wound.

No. 41.—A GOOD SALVE FOR BRUISES, &c.

Take one pound of spikenard root, one pound of tobacco, and half a pound of comfrey root; boil these in six quarts of chamber lye, till almost dry, then press out the juice, and add to it pitch or beeswax enough when simmered together to make it the consistency of a salve; apply this to the parts affected.

No. 42.—TO STOP BLOOD FROM A FRESH WOUND.

An Indian remedy. Take three different kinds of herbs, you need not be particular what they are; chew them all together, and apply the contents, with the spittle to the wound. This remedy they use for man and beast (with great success, they say); it is simple and easy, being always at hand.

No. 43.—TO MAKE CASLER'S LINIMENT.

To one gallon of alcohol, add one pound of cedar oil; half a pound of squaw weed oil (blue blow); half a pound of oil origanum; half a pound of wormwood oil; half a pound of spearmint; half a pint tincture of lobelia; and one ounce of camphor gum; and color with red sanders.

No. 44.—TO MAKE GUIWIT'S LINIMENT.

To one gallon of alcohol, add half a pound of wormwood oil; half a pound of origanum oil; four ounces of gum myrrh; one ounce oil of anise; and two ounces of camphor gum.

No. 45.—AVERY'S CURE FOR CORNS.

Take the extract of swamp ash bark, off from the roots; add a very little spirits of turpentine; apply this three or four times — or a strong lye made from the ashes of the same wood. Most corns will be removed in this way, without giving any pain. Where the above is not sufficiently strong for the purpose, or for ringbones, add a very little corrosive sublimate and laudanum.

No. 46.—AVERY'S EYE WASH.

An excellent remedy for inflamed eyes: clear, cold water; apply often.

No. 47.—STAFFORD'S CORDIAL FOR A WEAK STOMACH.

A good remedy for man or beast, try it. Take pitch pine wood and shave off in thin shavings; put these in a glass bottle and cover them with alcohol; let it stand fourteen days, then turn off, and reduce with water on taking; take a teaspoonfull three times a day; add to each dose six or seven drops essence of peppermint.

No. 48.—TO MAKE TURNER'S LINIMENT FOR BREACH.

Comfrey root, boiled in vinegar, and spirits of turpentine, and as much alum as can be dissolved in the same. This may be used both outwardly and inwardly with safety; and is a good medicine for the above use.

No. 49.—TO MAKE GOOD ADVICE ACCEPTABLE AND USEFUL.

It must be administered with a kind and friendly motive, and must not lack of previous good example, on the part of the one giving the dose.—*Avery's*.

No. 50.—FOR A VERY WEAK STOMACH OF LONG STANDING.

An Indian recipe; look at it. In the first place omit taking all kinds of medicine whatever. Take rye, wash it clean, and boil it in the same manner as you would rice; make this your constant diet; be sure and not take any other kind of food whatever, till you are satisfied you can bear it; drink a tea of white pine bark, and slippery elm. This is said upon good authority to have cured

persons who have been troubled with a weak stomach for years.

No. 51.—FOR THE DROPSY.

From the same author. Take the juice of the white pond lily root; temper it with barley meal, and bake it for ordinary bread. This, he says, has been known to effect a cure when medicine failed to do it. This is so harmless, there can be no danger in making the trial. Now here are two important diseases that we are liable to, said to have been cured by mere dieting, as it were, which coincides precisely with what I have witnessed in the horse, by a change of food; from high to low, or from low to high. But this is not always all that is necessary to effect a cure, but when you can get rid of any disorder by a systematic diet without medicine, reason teaches, it is the best way of doing it.

No. 52.—FOR A SPRAIN.

Take two spoonsfull of honey, the same quantity of salt, and the whites of four hen's eggs. Beat the whole together for an hour, then let it set an hour, and after this anoint the sprain with the oil that will be produced from the mixture, keeping the affected parts well rolled with a good bandage. This is said to be one of the best things ever known for a sprained ankle; and will readily relieve the horse of locked ankles, &c.

No. 53.—FOR THE RHEUMATISM.

Take a handfull of horse-radish roots, the same quantity of prince of pine, and a little of prickly ash bark, elecampane roots, bittersweet root bark, wild cherry tree

bark, mustard seed, and a pint of tar water; put this into two quarts of brandy, and drink a wine glassfull twice a day before eating; wash the parts affected, with salt and rum, by a hot fire.

No. 54.—FOR THRUSH OR CORNS IN FOUNDERED FEET, &c.

Clean the hoof well, getting all the dirt out of the rot on each side of the frog, by means of a sharp pointed scratcher, every evening, and turn in a little melted white pine turpentine for a few days (for the want of this put in salt), and in the morning, turn in tallow and rubber melted together; this forms a coating that will keep out the dirt during the day. If you stuff them at night do it with clay.

No. 55.—THE TRUE PULSE.

In order to ascertain the true state of the pulse, the horse should be approached very gently and cautiously, as the excitement caused by harsh and loud words, or the whip, will raise the pulse from five to ten beats per minute, he is so excitable, especially when diseased.

No. 56.—RENEWAL OF LIFE.

I have seen the horse, when he was very much troubled to breathe, and given up to die by some, restored to health, by giving him a dose of the camphor, peppermint essence, and adding a teaspoonfull of the buck's horn (freshly rasped), and proper treatment afterwards. The hot drops may be used afterwards, or before for want of the former, but this is the best on such occasions of anything that can be given, and may be given with

safety let the disease be what it may. Perhaps there are no two diseases that the horse is liable to in the first stages thereof, that is so difficult to distinguish one from the other, as inflammation of the bowels and of the lungs; and add to these that of spasmodic colic; these make three as dangerous ills as they are subject to. The colic, however, is easily distinguished from inflammation, by being sudden in its attack, and having intervals of rest and ease, with the extremities not much altered as to warmth, and the pulse but little changed, only evidently fuller. In colic, the above medicine may be given with the best result; laudanum and dried sweet flag root, grated in, may be added to advantage, and physic in this case will be proper. But in inflammation of the bowels the order is reversed from that of colic. The legs and ears are cold, the pulse much quickened, and the attack and pain is more steady—in this case, as well as in inflammation of the lungs, copious bleeding may be resorted to with beneficial results to the patient, while physicing would prove more disastrous. But to distinguish between inflammation of the bowels and inflammation of the lungs, recourse must be had to the manner in which the horse stands, and the lining membrane of the nose (which is the thermometer for the lungs). With inflammation of the lungs, they will stand stiff, and wide apart with the forward legs, so as to give as much room as possible for the lungs, and always choosing to stand up—while with inflammation of the bowels they are inclined to lie down; with inflammation of the lungs their breathing is not so regular (as that of the bowels), being more hurried at times, and the membrane of the

nose a darker color, and as the disease progresses of a more purple hue or tinge in spots; and in both of these diseases the animal is greatly weakened and distressed by exercise. While in colic, the strength is not much affected, and relief is often obtained by motion, and rubbing the belly.

I leave for others to designate the use of the scalpel, in dividing the skin, flesh, cords, muscles, tendons, and fibres of the animal, &c.

No. 57.—LIGHTNING LINIMENT.

Good for all nervous affections, rheumatism, &c. Take one part of chloroform, two of laudanum, and four of spirits of turpentine; mix them together and bathe the legs, back, or any other part of the body, where the animal is in great agony, and it will afford immediate relief.

No. 58.—MULLEN OIL.

Horsemen, and others, attend. This is not the least in value, if it is towards the last of my list. Good for inflammatory rheumatism or any kind of a sore, by applying it to the part affected. Excellent for catarrh, or glanders, by throwing it up the nostrils, and anointing the temples and forehead. I obtain it by picking the blossoms in summer and placing them in a glass bottle; when full, hang it up in a warm place where the sun can strike it, until the blossoms are decayed; there will be an oil rise on top, which you can turn off, and it is fit for use. This is the Indian's greatest remedy for taking film from the eye.

No. 59.—FOR COLT DISTEMPER, OR STRANGLES.

If you wish to apply hot fomentations, steep lobelia herb in vinegar, and bind the herb on the throat hot, after bleeding.

As we are all creatures of circumstance, we must be governed, in part, by circumstances; but a man may be brought up at college, and spend his whole life in studying, and if he has no natural capacity, may fall far below those whom nature and experience have taught.

“There have been men, from the earliest ages of the world, blessed with the sublimer powers of genius; who could, as it were, with one comprehensive view, grasp the whole circle of science, and leave learning and art to follow after them in vain.” Or they have a peculiar faculty to make people think so. And yet, you will find it difficult to get one original idea from them, on any subject whatever, that is calculated to benefit you. But this need not hinder any one else from improving the capacity given him, and giving it the right direction to prove useful to his fellow man.

No. 60.—COMPOSITION FOR RINGBONE, OR BONE SPAVIN.

Two ounces of spirits of turpentine; one ounce of oil origanum; one ounce of corrosive sublimate; half an ounce of opium; and half an ounce of camphor gum. Mix these all together and add a very little alcohol, and it is fit for use.

No. 61.—FOR RHEUMATIC AFFECTIONS, &c.

Spirits of turpentine, with as much camphor gum as will dissolve in it. Good brandy, with gum guaiac, dissolved in it, is also often a useful application for this purpose.

No. 62.—FOR BLOAT IN HORSES OR CATTLE.

Give one gill of spirits of turpentine in two or three gills of water; the effect is instantaneous. For the want of this, give two gills of melted lard, and the same of new milk, well mixed before being given.

No. 63.—FOR FOUNDER, STIFFNESS, &c.,

In the chest, &c.; add to the horse's feed, a handfull of sunflower seed, once a day, and he will be most likely to come out right in a short time.

Steel is made harder, by first heating; and then dipping it in water; and sometimes rendered tougher, and not so liable to crack in working it, by the use of oil. It is true, also, that it may be made too hard, or left too soft by the workman, to answer the purpose for which it was designed. Therefore experience, as well as skill, is necessary to bring this art to any degree of perfection. And so it is, in tempering the iron nerves and muscles of the animal; for when any part the body is raised to a great heat by disease or any other cause, it should be cooled gradually before the fire consumes the whole; and great care should be taken in the cooling process, whether you use water or oil, that you leave a good spring temper.

No. 64.—A POULTICE.

In cases where a swelling is very painful, and the object is to relieve the animal from pain, as well as to relax and rot, or bring it to a head, a good poultice is made by boiling equal parts of soft soap and tobacco together a short time, then apply warm, after thickening with wheat flour.

No. 65.—ELECAMPANE.

This root when dried and powdered, is good for a cough, mixed with other things, or alone, but it is not sufficient alone to cure an old chronic cough. Give the horse a spoonfull for a dose.

No. 66.—TO LEARN A HORSE TO PACE.

Fasten a leaden weight of some three or four pounds (prepared so as not to hurt the leg), just above the ankle; ride or drive the horse briskly, pulling the reins alternately at the same time; this will throw him into a pace; after exercising him in this way until he gets the desired gait, you may change the weights for lighter ones, using him in this way for a short time, he will become an easy pacer.

No. 67.—WHERE STRONG ERHINES ARE WANTED.

In cases of colds, &c., use the dry cayenne. If the object is to only make him sneeze or snort out the mucus, as it will not have this effect, when mixed with the ointment, but only help locate more heat, and change the action of those mucus membranes, &c.

No. 68.—WONDERFUL, BUT TRUE.

For any kind of soreness of the bowels, caused by colds, colics, strains or severe purging, the camphor root, either dried and powdered, or steeped, is an infallible remedy; add to this, in cases of threatened or real inflammation of the bowels, or difficulty of urinating, the yarrow herb, prepared in the same manner, and you have a panacea.

No 69.—A SALVE,

That is very cooling, soothing and healing, good to apply to any kind of a sore, where there is any inflammation, either local or general. Take the well-known herb, called liveforever, bruise or powder it fine, and then simmer it in sweet cream; then add camphor gum while it is only warm enough to dissolve the gum, mix thoroughly, and it is ready for use; apply by binding it on, or rubbing it over the surface of the sore.

No. 70.—OX MARROW.

The spinal marrow of the ox or cow, by diluting with spirits of turpentine, is sometimes a very useful application for poll evil or fistula; in the beginning of the disease apply often, by rubbing it on with the hand for two or three days, when a cure may be looked for.

No. 71—FEVER SORE CURE.

Take about equal parts of spikenard and comfrey roots, clean them; then take the same quantity as of both the former, of fat, salt pork; chop them all very fine, and simmer over a slow fire for a short time; add

two spoonsfull of honey to a pound of the above, and it is ready for use, when cool. This is said to be a certain cure for fever sore, or any deep seated or ulcerated wound on or near the bone. Add to the above salve, wormwood oil, so as to make a liniment, and it is one of the best things to disperse swelling or callous of the parotid glands (that lie just over the angle of the jaw bone), that is left by distempers or colds.

No. 72.—To CLEAN THE HORSE.

When the horse is troubled with dust or dandruff in the hair, caused by surfeit, &c., let him roll in dry sand, as he will be very willing to do whenever he has an opportunity to do so; wash and clean with a brush; this will take the sand all out of the hair, which will take the dandruff along with it, and both helps cleanse the skin.

No. 73.—CAUTION.

“Immodest words admit of no defence,
For want of decency is want of sense.”

As the fœtus partakes largely of the peculiar quality of the blood (at the time of the union of the sexes, as well as after) of the dam, it is essentially necessary in good breeding, that care should be taken not to ride or drive her to excess, immediately previous—that is, not to heat her blood to an unusual degree. And she should be kept in some quiet place, where she will not be teased by other horses, for several days afterwards.

No. 74.—ADHESIVE OR STICKING PLASTER.

Take three pounds of rosin, half pound bees' wax,

four ounces of mutton tallow, and two ounces of white pine turpentine; melt and mix together; when sufficiently cool, work into rolls to suit convenience.

No. 75.—CELEBRATED LINIMENT.

Take one ounce of origanum, one ounce of cedar, one ounce of hemlock, and one-fourth of an ounce of worm-wood oils, then one-eighth of an ounce each of cloves and camphor gum, add to this one quart of alcohol; use spirits of wine and color if you like; good for fresh wounds, sprains and bruises.

No. 76 —A NEW DISCOVERY FOR A BURN.

They who pull down the stately fabric of general health and prosperity, find themselves buried beneath its ruins. Dry charcoal, pulverised and laid over a fresh burn, for one hour, will ease the pain and cause it to heal in almost an incredibly short time; simple, but certainly deserves a trial.

No. 77.—TO BREAK A HORSE FROM KICKING.

Strap up one of his fore legs so that he can not get his foot to the floor, then exercise and handle his hind legs, moving him about the floor till he is tired of standing on three legs, and becomes submissive. A few lessons in this way will render him safe to handle anywhere. Strange as it may appear, the horse in walking or trotting, never has but one foot off the ground at a time; which accounts for the efficacy of this mode of treatment.

No. 78.—CUTTING TEETH.

Colts, when first foaled, if parturition was at maturity, should have four front teeth, two in each jaw; and it is sometimes the case they have four in each jaw. But it sometimes happens, that none of these are cut through, and the gums are inflamed, and so tender that the colt can not suck well. This should always be looked to, and the gums cut through with a sharp knife if necessary; and if needs be should be fed with milk, sweetened with molasses, till it can suck freely.

No. 79.—FOR MILK LEG SORES.

Take quick lime, and strained honey, about equal parts; makes a good application for an old sore or wound of this kind; if used as a wash, add Boston rum, or use No. 71 on the sore, and bathe the limb with the hot drops. Many of the big legs we see are caused by injuries in the back or spine, causing dropsy of the limb, that should have been remedied by some of the foregoing liniments. But after being allowed to run until they become chronic, it may sometimes require more active treatment, in order to effect a cure, when nothing short of blistering or the cautery need be resorted to, or the prepared cotton, but fire is fire.

No. 80.—ANOTHER HEAVE BALL.

Equal parts of quick lime and honey, adding a very little lobelia seed. Work these into a common sized ball, and give one every morning, until relief is found. For want of the lobelia, use more of the powdered elecampane root.

No. 81.—A LINIMENT FOR SPRAINS, BRUISES, RINGBONES
AND SPAVINS.

This is a compound that harmonizes well, and is useful in many cases, when applied to the human flesh, viz. : to one quart of alcohol, add two ounces of oil of wormwood ; and one ounce each of cedar, hemlock, balsam, amber and origanum oils. There are medicines which remove diseases, only by substituting others, worse even than the first. In using medicines, therefore, remember to use such only as will assist nature, and not impede her, and destroy the system.

No. 82.—FOR SWEENEY.

If the horse is to be worked, while under treatment for this disease, the following will be the best mode of procedure to effect a cure : the muscles being contracted, the skin adheres to the bones and muscles, and becomes very tight on the shoulder, or the affected part. Anoint the place once a day, for two or three days in succession, with spirits of turpentine, after which begin to rub it well every day with bear's oil (or for the want thereof use melted lard), and also pull the skin up loose all over the place affected, with a pair of large flat pinchers. This being attended to for some two weeks, and a few applications afterwards of No. 81, will relieve and strengthen the muscles, and the horse is cured of his lameness.

No. 83.—DISINFECTING COMPOUND.

Take dried and pulverized plaster of Paris, mixed with one-fourth part of its weight of powdered charcoal.

This is a cheap and effective disinfecting composition; it removes the noxious emanations from decomposing organic matter, it fixes the ammonia, and forms a valuable manure, when removed from the stable, &c.

No. 84.—AN EXCELLENT LINIMENT.

For skin fractures or blotches: take fresh butter and try it until the buttermilk is out of it, then add the same quantity of origanum oil, a little camphor and spirits of hartshorn; mix thoroughly.

No. 85.—TO CLEAR THE EYE FROM DIRT.

Take oil of peppermint, and rub it on freely below the eye; this will steam up into the eye, causing a copious flow of tears, which, together with the motion of the eye, will wash out all loose dirt that may be in the eye effectually. It being so very difficult to work at the horse's eye, owing to its great sensitiveness, that this remedy is often beneficial.

No. 86.—HAPPINESS CONSISTS IN DOING RIGHT.

Brother farmer, come let us join the light-infantry of Progress, that success may be ours. It may be pleasant to ride over the flower strewn path that lies before us, and partake of the bounties of earth, while the eye feasts on the starry-curtained heavens that hang over us. And if we grow wiser, happier, and more useful to our fellow soldiers, on our journey, then the object for which we enlisted is accomplished.

No. 87.—RESTORATION TO HEALTH.

When the horse has sunken, sallow-looking, gummed eyes, you may give him a spoonfull of pulverized copperas, to advantage, but it is not best to repeat the dose under a week, if at all, as the poison it contains is too weakening if too often repeated.

No. 88.—THE NON PLUS.

The common puff ball is sometimes useful in staunching blood, from a fresh wound, by breaking it up and binding it on the wound. It also has about the same effect on the horse that chloroform does on the human, by drying it, and then letting him inhale the smoke thereof, while it is burning on hot coals; this is used sometimes (in the absence of other articles) for medicating the horse.

No. 89.—FOR A GENERAL MEDICINE.

As I stated in the commencement of the second part of this work, that there could not be anything very serious about the horse, that did not affect any of the principal outlets of the body, viz: the skin, urine or excrement, because, if any of the internal organs of his complicated structure be deranged, it will soon show itself in some one or all of these, which calls for some artificial stimulant to set them right again; and not unfrequently, it requires a general medicine, that will act in harmony on the whole; and then it is often the case, aside from this, that there is a want of vital energy of the system, when the pulse will be below the common

standard, which calls loudly for an additional stimulant to the arterial system, which may be found in the use of the following articles: Take one gill of superfine flour of slippery elm bark, and four spoonsfull of Cape or Barbadoes aloes, and the same of saffron blows, with one spoonfull of camphor gum, powdered and mixed, will be sufficient for four to eight doses, which may be given in a quart of warm water sweetened with molasses, as a drench, or worked into balls with the same, and well oiled, and given as often as the case may require. But when the difficulty is most apparent in urinating, leave out the camphor and saffron, and in lieu thereof, add rosin or balsam of fir; or if this is not the case, and there is a want of vitality, or natural warmth of the body, leave out the rosin and balsam, and in lieu of them add cayenne and gum myrrh, which in any case that requires medicine, may be followed by giving a quart of strong tea, made by steeping the common garden sage, which is admirably adapted to the wants of the horse, as I have before stated. But, if the animal is in extreme pain in any of the urinary organs, and the object is to relieve his suffering, then apply hot fomentation (hops for instance), to the body; if the disease has so far advanced, that there is danger of mortification, apply the hot drops, or pure rock salt and cold water, this, together with the stomach tonics, recommended for derangement of the stomach, and colic, is all that will be necessary for nearly all ordinary cases of disease that the horse is subject to of this kind.

Assisted by memory, I have picked up the scattered fragments of the mind—and like the skillful mariner, who carefully fills up his log, for the purpose of knowing what degree of latitude and longitude he is sailing in—I have endeavored to map the ground that I have traveled over, so that any one following on my track, will be able to shun the rocks and shoals that have shipwrecked others.

Though I do not pretend but that there are points relative to the horse, that are beyond the horizon of my investigation; yet I think I have said enough to benefit that class of readers to which this little treatise is dedicated.

NO. 90.—THE FARMER'S MEDICINE CHEST,

Should be situated in some safe and convenient place about his dwelling or stable; and should contain a nice lancet, fleam, horn or bottle; a good syringe that will hold at least a quart; a pair of forceps sufficiently strong to pull teeth or shoe nails, and two scratchers, one straight one, and one crooked or hooked towards the point, for the purpose of cleaning and examining the feet.

He should also provide himself with (at the proper seasons for gathering them) such plants, herbs, barks and roots, as he can easily procure from the fields he so often travels over, and are most needed in the treatment of the most common diseases (at least) that frequent his stable; and such other medicines as I have recommended, or he may prefer, in treating all ordinary diseases of the horse.

Supposing you have never been taxed, by having sick

or lame horses, you are not exempt any more than your neighbors, unless it is because you have learned to take better care of them. And then you will please remember the text, that an ounce of preventive, is worth a pound of cure. And I am sure that it is easier paid for, when two pounds of the former can be had at a less cost than one ounce of the latter.

NO. 91.—ANOTHER RECIPE FOR CONDITION POWDERS.

To raise and animate the drooping spirits of a very sick horse, perhaps there is nothing better in the world, than the remedy given under the caption of *Renewal of Life*. And to strengthen the digestive organs, and restore good health and prime condition, after any kind of fever, inflammation, &c., the following is a good remedy: Take equal parts of ground mustard, grated liquorice root, and the filings of deer's horns; these should be all newly powdered, and then add to one part of each, two parts of the flour of the elm bark; if there is a cough, add elecampane root (a small part), which may be scented with anise, &c. Give a tablespoonfull every morning, for four or five days—except in urgent cases, give twice a day—in a mash of bran or soaked oats; if the animal refuses to eat it prepared in this way, fix a new dose, and give it in a pint of water, with a horn or bottle.

NO. 92.—A SIMPLE DIGESTIVE,

Or restorative, merely to assist digestion and cleanse the stomach, as many other diseases proceed from this cause alone, give the horse a tablespoonfull of powdered charcoal, and a teaspoonfull of peppermint essence in a

pint of water. Good nursing in all cases of disease, is very essential.

We often see horses grow up with their limbs disproportionately large, or small, for their bodies; and it is not unfrequently the case that this is caused, measurably, by the quality of food he subsists on. I have often seen this kind of horse much improved, by changing the quality of food, which is sometimes brought about by changing owners, &c. That is, when their limbs have been too light and slender, they would gradually grow larger and firmer. And when the limbs have appeared too large, the body would grow, so as to be more proportionate to the limbs; and all this brought about by judicious feeding and exercise. The buckwheat, notwithstanding its cooling and cleansing effects on the system (for the purposes I have recommended it on account of its medicinal properties), also contains more phosphate of lime (which increases the growth of bone), as well as more fatty matter than many other kinds of grain.

No. 93.—FROGS' OIL.

To relax the muscles, &c., take two or three quarts of sweet cream, set it boiling in a kettle; then put in one dozen of large live frogs, and let it boil until there is nothing left of the frogs, except bones, then strain, and try down to an oil. An excellent remedy for string halt and sprung knees, apply as before directed; sometimes a little cedar oil may be added advantageously, for tetanus.

No. 94.—A GOOD DOMESTIC LINIMENT.

To one pint of good alcohol add one and a half ounce of origanum oil; one ounce of camphor gum, and half an ounce of laudanum.

No. 95.—A GOOD HORSE LINIMENT.

One pint of alcohol, one pint of spirits turpentine, two ounces of camphor gum, one and a half ounce of origanum oil, one and a half ounce of oil of amber, one ounce of wormwood oil, two ounces of Barbadoes tar, and three ounces of Castile soap; good for cuts, burns, bruises, sprains and neuralgia.

No. 96.—CAUSE AND EFFECT.

As sure as effect follows cause, just so sure there is a cause for effect; and this is applicable in disease as well as in anything else. I have no doubt, even in this section of country, that many of the ills that the horse is subjected to may be attributed to improper feeding, and that as many horses suffer from this cause, as from want of feeding. I know many farmers and others that are in the habit, as soon as their oats are harvested, to begin feeding their work horses with oats in the bundle, until winter, or until they have time to do their threshing; and others, while feeding a good portion of grain, make up the remaining part of their food with straw. As a general rule, this last does very well, and especially where cut feed is not used at all, and more particularly after their horses are old enough to be put into work, say five or six years old. Although this mode of feeding has had its disastrous effects with the horse, the present season. Owing

to the late and wet spring of 1858, and the frequent showers and hot sun that intervened, the oat crop was sown late, consequently but a light crop was obtained, the straw of which was almost invariably struck more or less with the rust. This rust, or ergot, contains poison, and by constantly feeding the straw, its effects are like a slow poison, taking in more of it with their food than can work itself out through the pores of the skin. It is an ergot of the oat, the same as that of rye, or the grasses which causes hoof ail among cattle. I have known quite a number of horses suffering from this cause, and had several under my immediate observation and care the past winter (1859). *Symptoms:* Refuses to eat, drinks daintily, having languid feeling with cold ears and feet; pulse slow and weak; much inclined to lie down, rising, pawing, and looking around to the sides occasionally, but only when the paroxysms come on, caused by the contraction, or spasms of the muscular coatings of the stomach and intestines, flanks tucked up, &c. *Cure:* First remove the cause by a change of food, and the effect ceases; nature will again rally without a foe. Secondly, a little mint water and powdered ginger, will be very beneficial in restoring tone and action to the system.

NO. 97.—THE STUDY OF NATURE.

I am not an Agassiz, nor a Humboldt; but I fully concur with the former in the sentiment that the study of the phenomena of nature is among the most potent means of developing the human faculties. As an evidence of this look at the latter, who is the very embodiment of the most extensive human knowledge in our days; “and

who has acquired this position, and who has become an object of reverence throughout the world, merely by his devotion to the study of nature."

I am well aware that it is easier to give advice than it is to take it. For this reason books often become a dry study; therefore he that wishes to profit by the study of nature, should go out into the fields and forests, and draw its objects around him by the most scrutinizing observation. There he will learn what he can not draw from any other source, and what he can not buy, and feel what he can not write.*

For instance, if we want to be animated by the charms of music, we must not only study the rules which help cultivate the memory, but we must take an instrument and learn to play it. If we would be interested in the study of plants, let us go to the plants themselves. If we would study mineralogy, let us take specimens, stones, minerals and crystals. Or if we would study natural history, then let us have the animals before us. Then books will have a meaning, they will no longer be a dry study, but grow more interesting and useful as we peruse them.

Man can not change the principles of nature, but he must learn to take the phenomena of nature as they are, which should teach him humility and truth; for what-

* The world's great humorist and naturalist, Dan Rice, who has (he says) tamed and educated a variety of animals, from the Rhinoceros down to the Goose, says the Naturalist can not write; he knows things are thus and so, but the whys and wherefores he can not tell if he would.

ever he finds in nature is true; therefore he should bow to what is, and what he can not (with all his pride and wisdom) change. And while learning this he will acquire a knowledge of things as they are, a power which can neither be checked nor lessened, and which will enable him to see the relation he bears, and his duty towards the animal creation, which will improve the mind in proportion as his opportunities for observation, and willingness to serve his master, increases.

He will also learn to see the similitude that exists in all quadrupeds, and that they are all constructed on the same great plan; that the Great Architect knew how to apply the same means to purposes as different as walking, flying, and swimming.

NO. 98.—THE TOURNIQUET.

The Doctor had a splendid horse, but he had one bad habit, that of being very ugly to shoe; he kicked so when they attempted to nail the hind shoes on that the smiths were all afraid of him; they cast him several times for this purpose. I found by buckling a strap around each hind leg above the hock so as to compress the ham-string sufficiently, there was no difficulty in drawing, driving and clinching the nails without being kicked out of the barn, a thing that several horsemen had failed to accomplish. The Doctor must take his tourniquet along with him the next time he wants his favorite shod.

No. 99.—CURE FOR A DESPAIRING MIND.

Take one drachm of each, faith, hope and charity; sweetened with one ounce of that love that worketh no ill to its neighbor; the whole to be taken (morning and evening) in a glassfull of truth, until the patient is convalescent.

HINTS TO PURCHASERS.

Rum, Brandy, Gin and Whiskey, are more or less all adulterated articles at the present day, and the less we have to do with them (as a general thing) the better. Our Teas, Sugars and Tobacco, with many other articles of a like nature, come under the same category; and it is better to buy a pure article when we can, even though the first cost may be more; it will be cheaper for us in end, if, by so doing, we preserve our health. Cotton is fast taking the place of wool and silk, in many of the fabrics intended for our use; consequently it becomes necessary for us to make ourselves acquainted with the different modes of manufacturing those articles, that we may be able to detect the imposition, and see that we get what we pay for. We need say nothing about jewelry, and those articles that our pride and extravagance have called into use. The horse, too, notwithstanding the great space he fills among the many wants of man, is a very deceivable kind of property. Even our best judges are sometimes liable to be deceived on some points, when they purchase a horse. They are obliged to content themselves with guessing at them, or rely on the honor of the salesman; and then there are certain requisites among the excellencies of those useful creatures, that are indispensable for a good horse to have. My views of which can be found in the chapter of breeding, and when rightly studied will defy all Yankeedom to deceive us.

Some men are so perfectly ignorant to their true interest and happiness, that it would seem as though no

recuperative treatment was sufficient to make them refrain from this common error, in using a little deception in the sale of their animals; but they should remember that for every dollar gained in this way (to the pocket), there are ten lost to the reputation, and nine times out of ten where this course is pursued, for any considerable length of time, it brings both to bankruptcy, or the proprietor is lost to true happiness.

And then some are quite apt to deceive themselves by not exercising their better judgment, or relying to much on what they may have heard some one say, or having formed too favorable an opinion before hand, for all these things have a powerful influence on the minds and judgment of most men at such times, in fact so much that they can not tell afterwards whether the questions they asked were answered, or some they did not ask; for if they see one or two points in a horse that pleases them, it becomes an easy task for the jockey to divert their attention from all the rest, however bad they may be. Therefore, to become a successful purchaser, we must learn something of human nature, as well as that of the horse.

In the first place, if you wish to purchase a horse, you should be calm and deliberate, considering well the use you are to make of the animal you are about to buy, and then select one that is well adapted to your purpose, remembering that the size, shape and motion of the ear, with the expression of the eye, is an index to the disposition and temper within, as much as the legs (which should be free from all blemishes whatever), and the

general symmetry of the body, are of his muscular power. The feet should be carefully examined; choose a round and smooth hoof, not too soft nor too hard, the bottom of which should be curving, as a flat foot, with a spongy heel and frog, is very objectionable.

As to the soundness of the lungs and other parts of the body, you have three chances, viz: to trust to your own knowledge and good judgment, or rely on the honor of the salesman in this respect, or carefully study the horse and this book, which I leave as a boon, that I sincerely hope you will be able to profit by.

My boat has reached the shore,
My mark you now can see.
And yet, I wish still more
To aid myself and thee.

CLOSING REMARKS.

Life is before us; let us use it as children of one far superior to any and all of us, whose all-seeing eye ever rests upon us, and to whom we should return thanks for everything we enjoy, as all this is a gift from Him.

I have already gone beyond the space I intended to occupy when I commenced this work, but any one can readily perceive my limited position, and will excuse me for going over so much ground, when they consider that a whole volume would be necessary to describe the eye or foot alone of the horse, in all its parts.

Thinking that a description of all the various diseases that the horse is liable to, together with the remedies suitable for their cure, would be more useful and satisfactory to the public (which I have endeavored to do as well as my feeble pen could describe my ideas), than to undertake to give an anatomical description of his complicated structure, which could be of no earthly use to any one unless he had a practical knowledge of the other. It is our business to take care of the horse, which differs a little here from the engine, that we both manufacture and keep in repair afterwards.

If one-half of the time and expense that has been laid out in analyzing minerals, and manufacturing theories, had been laid out in studying into the nature of disease, and their proper treatment by simple vegetable medicine, we should have been far better off (to-day) than we now are, I think.

And whenever I am conscious that this little book has been the means of saving one poor man's horse, I shall

feel amply rewarded for the time and trouble it has cost me to throw my thoughts on these pages. And yet I know that if it should be appreciated, and generally adopted in veterinary practice, that it will be the means of saving thousands that might otherwise go to the bats every year. And when they show that I have not as clear a head, and as honest a heart as other men, on the true principle of governing a horse in health, and when diseased, it is hoped that they will prove this by giving to the world something better than I have done.

I can not help protesting against the old method of giving advice to the effect that when a horse was or had been diseased, to trade him off, or sell him as quick as possible. My advice to the owners of such animals would be to first cure them of any and all diseases that they may have, which can be done, and then do as they please about parting with them. Or, if they sell them, sell them for what they are worth, as they are, hiding nothing.

I was astonished to-day on taking up the *New York Tribune* (February 20th, 1858), to see that the editor of that valuable paper should, after giving his patrons some wholesome advice as to the treatment of several diseases of the horse, wind up the thread of his discourse by following this old method of advice in these words: "And now, one word to the owner of a horse that has had one bad attack of inflammation, either of the lungs or of the bowels—get rid of him as soon as possible."

Now what one man would gain by following such advice as that, another must certainly lose, and, be-

sides this, look at the amount of litigation it has cost (if not perjury) in the world. Therefore, I say, when a man has a diseased horse, he should set himself to work studying into the nature of the disease, and apply those harmless remedies that nature has provided for all, until he effects a cure, or place him in the hands of a competent person for this purpose, but not trade him off as sound because he does not know how to make him such.

In human life there is a constant change of fortune, and it would be unreasonable to expect exemption from the common fate of mankind. Life itself decays, and all things are daily changing, yet I hope and trust that you will endeavor with me to use the things of this world so as not to abuse them. Do right and fear not, is the motto, for fear and ignorance are the parents of cruelty.

Well, as I happen to live in the days of fast men and fast horses, I must pen a few more lines and then I am done. The time has been when any improvement in horses, was by many almost despaired of; and even rail roads, as well as the march of other improvements, if not impeded, have been objected to and opposed on the ground that horses would be thrown out of employ; that there would be no market for them, consequently the farmer could not get pay for raising them, but the result has proved the reverse of this.

The fact in this case is, the horse is an adjunct of civilization, and can never be dispensed with. The furtherance of other improvements, only serve to his advancement, and to increase his demand, for the supply of good

horses was never yet equal to the demand. And every one knows that the ability of a horse is the measure of his worth, for a horse that will go a mile in three minutes, is worth more to the physician or business man than one that only goes a mile in ten minutes. And we all like to see smart men and smart horses, for the faculties of both were given them for use. And we like to see the horse brought into the fullest exercise by judicious breeding and training, which tests the capability of matter. A greater interest needs to be awakened in the public mind, by diffusing useful knowledge in the way to improve these animals, to have this desideratum accomplished, and which is measurably being done by the encouragement given by our legislatures, the organization of our national fairs, &c.

There is as much philanthropy in making animal matter subservient to mind, as there is in improving and cultivating the mind itself, as the one helps to accomplish the other. And it always affords pleasure, to see a fast horse and a handsome gait, and one that never refuses to pull, and can back as much as he can draw.

The best of horses are none too good, for the best of men—neither are perfect yet.

There is a right and a wrong principle existing which is manifest to every one, and men are influenced more or less by the one or the other; but that the one of doing wrong is necessarily exercised in trading or dealing in horses, any more than in any other commodity, I deny. And that anything which I have said in the foregoing pages, should have a tendency to sap the virtues, or

encourage a spirit of evil-doing in any one, is far from the motive of your friend and would-be benefactor. Let truth ever be the pole star to guide us to the temple of fame, which will enable us to behold the wisdom and goodness of God as it shines through his love, as we see his bow through the rain drop.

ADVERTISEMENT.

Aristotle the great and ancient philosopher could describe (in his way and time) the use of each genital organ in the reproductive instinct, while there were other things he frankly acknowledged he knew nothing of. Dr. Franklin had not then invited the lightning from the clouds to prove that his theory was correct; nor had a Fulton lived to see his powerful agent (steam) harnessed for man to drive around the world. Could they be brought back, with what wonder and astonishment would they view the improvements of the nineteenth century, and which are, in great part, the result of their discoveries.

After making various experiments, through years of study, I make a Pill to give the horse, that is of great importance to showmen, sportsmen, and all friends of choice horses, which I call the *Quaint*.

The modus operandi of this Pill is, first, to invigorate the internal organs, causing the animal to appear more spirited, and increase his speed to such an extent as to satisfy the salesman of its utility. Secondly, while it does this, it contains properties that act as a preventive against inflammation or stiffness of any kind that might otherwise be caused by the extra speed it creates, and which can not fail to be appreciated by the sportsman, either in health or disease.

Motion of the animal body can not be effected without the expenditure of force. The voluntary movement of an organ creates a want of moving power, by exhausting

the conditions upon which motion is dependent. Hence this want amounts to the same thing as an actual demand on the fountain of life; the supply of this demand is a continual stimulus to the vital forces. Electricity, too (strange as it may appear to some), enters into every part of animal life, or, in one sense, is life itself, as it is this that gives life to all animated beings. And it may appear stranger still, when I assert that life can be produced by Art, which is in perfect harmony with the laws of Nature. Not that I would take the work of Deity in my own hands; but it is now being understood that life from embryo is developed by electric action—by an analagous process. And by charging the system to a certain degree with electricity, or adding to life for the time being by strengthening and invigorating the vital forces, we increase the speed and velocity of the animal.

Some physiologists have given it as their opinion, that the spleen of the human body serves as a reservoir for the superabundance of blood in the system, to be distributed again to such parts which, from some cause, are suffering from a deficiency of that circulating fluid; or, in other words, to preserve the equilibrium should it become deranged.

As with the spleen, so are there substances in nature surcharged with *electric fluid*. When the bodies, of which these substances are mere appendages, have attracted a larger amount of electricity than is necessary for their growth and health, these appendages receive this excess, to be returned again when the requirements of the bodies need it.

These facts, together with many others of a con-

vincing nature, have led me to analyze and experiment, until at length I discovered, under many phases of discouragement, a MEDICINE, combining many peculiar properties of a subtle and mysterious character. Its effects are so striking, I might add, *startling*, that I have been induced to lay it before those who look upon the horse as an animal worthy the esteem and friendship of man. To such I offer it, and not to those who consider him a drudge, a fit subject for kicks and blows, and who even deny him a sufficiency of daily food as a compensation for the hard labor he performs.

It is generally known that racers fitted for the course, are subjected to a rigid course of diet, calculated to promote strength and elasticity of muscle. Arterial stimulants are also employed from time to time, but more especially so when the speed and endurance of the horse are being put to the test. Thus far, these stimulants alone have been employed by sportsmen.

The recipe mentioned below contains several articles which, when combined, exert a general electrical influence, not only over the circulation, but also over the nerves and muscles. The horse, under the harmless but reviving effect of this medicine, will astonish those who know his capabilities, by his marvelous feats of fleetness and endurance. Unlike alcoholic stimulants, whose influence is ephemeral, it supplies a natural demand, and is as necessary to the full development of the animal spirits, as food is to the sustenance of the body.

This medicine is not calculated for general use; for this reason I did not place it in the body of this work.

But all who have an interest in good horses, and wish to show them up to their utmost capabilities, and witness a continuance of action without fatigue seldom met with, can, for their own use, avail themselves of the benefit of this discovery (which alone will be satisfactory evidence of its properties), by remitting Ten Dollars current money to the subscriber, on the receipt of which he will transmit, by return mail, the recipe, with full directions, &c., &c. Hear the horse:

Give me a ball of Avery's Quaint,
And on the course I'll never faint,
The lungs and muscles all tuned right,
I'll trot or run, with great delight.

JAMES AVERY, Salisbury Centre,
Herkimer County, N. Y.



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ERRATA.

Page 62. Swelling and inflammation. *This* is caused by taking cold after castration; should read, *That* is caused, &c.

Page 64, In recipe, should read, dissolve two drachms of sal ammoniac in water. (For it is soluble only in water)

Page 115. The remedy, tartar emetic, is left out. Should be put on the plaster for bone spavin.

Page 126, The word *smart*, should read *as smart*, or smart weed.





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